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AT 11:55:30 ON 02 FEB 2006
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FILE 'CAPLUS' ENTERED AT 11:55:30 ON 02 FEB 2006
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	163.15	317.77
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-30.75	-65.25

=> "organoboronic acid"
L16 187 "ORGANOBORONIC ACID"

=> organoboronate
L17 44 ORGANOBORONATE

=> 116 or 117
L18 224 L16 OR L17

=> 118 and salt
L19 19 L18 AND SALT

=> dup rem 119
PROCESSING COMPLETED FOR L19
L20 13 DUP REM L19 (6 DUPLICATES REMOVED)

=> d ibib abs total

L20 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:182674 CAPLUS
DOCUMENT NUMBER: 142:261649
TITLE: Process for purification of **organoboronic acids** by aqueous alkaline treatment, extraction and crystallization
INVENTOR(S): Bhat, Shashidhara; Punachithaya, Shridhar; Ganesh, Sambasivam
PATENT ASSIGNEE(S): Biocon Limited, India
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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OTHER SOURCE(S): MARPAT 143:7986

AB **Organoboronic acids**, e.g., Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-B(OH)₂ (Mpg = 3-methoxypropylglycine residue; Cbz = benzyloxycarbonyl), are made by hydrolyzing their diethanolamine adducts under conditions which avoid substantial C-B bond breakage. The product acids are substantially free of degradation product derived from cleavage of the C-B bond and are converted into base addition **salts** for use in anti-thrombotic pharmaceutical formulations.

L20 ANSWER 3 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 1

ACCESSION NUMBER: 2005465090 EMBASE
TITLE: Deprotection of pinacolyl boronate esters via hydrolysis of intermediate potassium trifluoroborates.
AUTHOR: Yuen A.K.L.; Hutton C.A.
CORPORATE SOURCE: C.A. Hutton, School of Chemistry, University of Sydney, Sydney, NSW 2006, Australia. chutton@unimelb.edu.au
SOURCE: Tetrahedron Letters, (14 Nov 2005) Vol. 46, No. 46, pp. 7899-7903. .
Refs: 27
ISSN: 0040-4039 CODEN: TELEAY
PUBLISHER IDENT.: S 0040-4039(05)02074-5
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20051027
Last Updated on STN: 20051027

AB An efficient two-step procedure for the deprotection of pinacolyl **organoboronate** esters is described. Reaction with excess potassium hydrogen fluoride produces the corresponding stable, crystalline potassium organotrifluoroborate **salts**. Treatment of the trifluoroborates with either inorganic base or trimethylsilyl chloride and water affords the corresponding **organoboronic acid** in high yield. .COPYRGT. 2005 Elsevier Ltd. All rights reserved.

L20 ANSWER 4 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 2

ACCESSION NUMBER: 2005486465 EMBASE
TITLE: Copper-catalyzed cross- and carbonylative coupling reactions of alkynyliodonium **salts** with **organoboronic acids** and organostannanes.
AUTHOR: Yu C.-M.; Kweon J.-H.; Ho P.-S.; Kang S.-C.; Lee G.Y.
CORPORATE SOURCE: C.-M. Yu, Department of Chemistry, Institute of Basic Sciences, Sungkyunkwan University, Suwon 440-746, Korea, Republic of. cmyu@chem.skku.ac.kr
SOURCE: Synlett, (17 Oct 2005) No. 17, pp. 2631-2634. .
Refs: 39
ISSN: 0936-5214 CODEN: SYNLES
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20051201
Last Updated on STN: 20051201

AB Copper-catalyzed cross- and carbonylative coupling reactions have been achieved in the reaction of a variety of alkynyliodonium **salts** with arylboronic acids and organostannanes under the mild reaction conditions in high yield. Our investigation shows that the alkynyliodonium tetrafluoroborates are more efficient than those of triflates and tosylates. .COPYRGT. Georg Thieme Verlag Stuttgart.

L20 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:648197 CAPLUS

TITLE: Separation of a sugar mixture by emulsion liquid membranes

AUTHOR(S): Lee, Sang Cheol

CORPORATE SOURCE: School of Materials Science & Chemical Engineering, Kunsan National University, San 68, Miryong-dong, Kunsan, Chonbuk, 573-701, S. Korea

SOURCE: Hwahak Konghak (2005), 43(3), 380-386

CODEN: HHKHAT; ISSN: 0304-128X

PUBLISHER: Korean Institute of Chemical Engineers

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB Separation of fructose and glucose was performed using emulsion liquid membranes

with a mixture of an **organoboronic acid** and a quaternary ammonium **salt** as a carrier in a batch reactor. In order to find a carrier and an optimal exptl. condition suitable to the sugar separation, extraction of each sugar was carried out independently. The effect of various exptl. variables, such as initial concentration of sugar in the feed phase, type

of **organoboronic acids**, and w/o ratio, on the sugar separation was investigated, and the concns. of sugars in each aqueous phase were

analyzed. The ratio of degree of extraction of fructose to that of glucose was very high, but the concentration of fructose in the receiving phase was not too high. Therefore, a stronger stripping agent in the receiving phase was required for development of a practical ELM system suitable to the sugar separation

L20 ANSWER 6 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 3

ACCESSION NUMBER: 2005443148 EMBASE

TITLE: Development of an emulsion liquid membrane system for extraction of a neutral species.

AUTHOR: Lee S.C.; Lee H.K.

CORPORATE SOURCE: S.C. Lee, Department of Chemical Engineering, Kunsan National University, Miryong Dong, Kunsan, Chonbuk 573-701, Korea, Republic of. lee40f@kunsan.ac.kr

SOURCE: Journal of Membrane Science, (1 Nov 2005) Vol. 264, No. 1-2, pp. 13-19. .

Refs: 28

ISSN: 0376-7388 CODEN: JMESDO

PUBLISHER IDENT.: S 0376-7388(05)00298-X

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 20051103

Last Updated on STN: 20051103

AB An attempt to extract a neutral species, fructose, in an aqueous solution by emulsion liquid membranes (ELMs) was made for the first time. A mixture of an **organoboronic acid** and a quaternary ammonium **salt** was used as a carrier for the extraction of fructose. We investigated the effects of various experimental conditions, the type and the concentration of **organoboronic acids**, the concentration of the quaternary ammonium **salt**, and the type and the pH of the external and the internal aqueous phases, etc., on the extraction of fructose. Finally, we found a suitable emulsion liquid membrane system to extract the neutral species even though development of a strong stripping reagent was required to improve the extraction efficiency of the emulsion liquid membrane system. With the help of a tetrahedral extraction mechanism, the transport of fructose could be explained as well. .COPYRGT. 2005 Elsevier B.V. All rights reserved.

L20 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:944236 CAPLUS
 DOCUMENT NUMBER: 143:229903
 TITLE: Transition metal-catalyzed bond formations: An expansion of the utility of organotrifluoroborate **salts** and **organoboronic acids**
 AUTHOR(S): Quach, Tan Dai
 CORPORATE SOURCE: Univ. of Toronto, Toronto, ON, Can.
 SOURCE: (2004) 310 pp. Avail.: UMI, Order No. DANQ94261
 From: Diss. Abstr. Int., B 2005, 65(10), 5158
 DOCUMENT TYPE: Dissertation
 LANGUAGE: English
 AB Unavailable

L20 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2004:198295 CAPLUS
 DOCUMENT NUMBER: 140:229443
 TITLE: Boronic acid **salts** of multivalent metals used in the preparation of a medicament for treating thrombosis
 INVENTOR(S): Madge, David Jonathan; Dolman, Mark; Combe-Marzelle, Sophie Marie; Deadman, John Joseph; Kennedy, Antony James; Kakkar, Sanjay Kumar; Chahwala, Suresh Babubhai; Boucher, Oliver Vimpany Arnold; Walter, Armin; Olbrich, Alfred; Krimmer, Dieter; Weiland-Weibel, Andrea Maria Theresia
 PATENT ASSIGNEE(S): Trigen Limited, UK
 SOURCE: Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396269	A1	20040310	EP 2003-255604	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
WO 2004022070	A1	20040318	WO 2003-GB3883	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2004022071	A1	20040318	WO 2003-GB3887	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2004022072	A1	20040318	WO 2003-GB3897	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1400245 A1 20040324 EP 2003-255590 20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

EP 1466916 A1 20041013 EP 2004-76510 20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

EP 1466917 A1 20041013 EP 2004-76521 20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2003014450 A 20050726 BR 2003-14450 20030909
BR 2003014518 A 20050726 BR 2003-14518 20030909
EP 1561466 A2 20050810 EP 2004-76548 20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: GB 2002-20764 A 20020909
GB 2002-20822 A 20020909
GB 2003-7817 A 20030404
GB 2003-11237 A 20030516
GB 2003-15691 A 20030704
US 2003-485786P P 20030708
EP 2003-255590 A3 20030909
WO 2003-GB3887 W 20030909
WO 2003-GB3897 W 20030909

OTHER SOURCE(S): MARPAT 140:229443

AB Salts of a pharmaceutically acceptable divalent metal and an
organoboronic acid as selective thrombin inhibitors are
described. Examples of such metals are calcium, magnesium and zinc. The
organoboronic acid drug may be a boropeptide protease
inhibitor. The **salts** may be formulated in oral dosage form,
such as a capsule or compressed tablet.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights
reserved on STN DUPLICATE 4

ACCESSION NUMBER: 2002138644 EMBASE

TITLE: New syntheses of bismuthonium **salts**, bismuthonium
ylides and bismuthane imides using triarylbismuth(V)-oxo
and -hydroxo compounds.

AUTHOR: Matano Y.; Nomura H.

CORPORATE SOURCE: Y. Matano, Department of Chemistry, Graduate School of
Science, Kyoto University, Sakyo-ku, Kyoto 606-8502, Japan.
matano@kuchem.kyoto-u.ac.jp

SOURCE: Synthesis, (2002) No. 5, pp. 631-634. .
Refs: 40
ISSN: 0039-7881 CODEN: SYNTBF

COUNTRY: Germany

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 20020502
Last Updated on STN: 20020502

AB Triarylbismuth(V)-oxo and -hydroxo compounds react with
organoboronic acids and esters in the presence of
BF(3).ovrhdot.OEt(2) to afford the corresponding bismuthonium

salts. They also undergo dehydrative coupling with cyclic 1,3-dicarbonyl compounds, amides and sulfonamides to give stabilized bismuthonium ylides, bismuthane N-acylimides and bismuthane N-sulfonylimides, respectively. All reactions proceed efficiently under mild conditions.

L20 ANSWER 10 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 5
ACCESSION NUMBER: 2001442435 EMBASE
TITLE: Synthesis and cross-coupling reactions of tetraalkylammonium organotrifluoroborate **salts**.
AUTHOR: Batey R.A.; Quach T.D.
CORPORATE SOURCE: R.A. Batey, Department of Chemistry, University of Toronto, 80 St. George Street, Toronto, Ont. M5S 3H6, Canada. rbatey@chem.utoronto.ca
SOURCE: Tetrahedron Letters, (24 Dec 2001) Vol. 42, No. 52, pp. 9099-9103. .
Refs: 23
ISSN: 0040-4039 CODEN: TELEAY
PUBLISHER IDENT.: S 0040-4039(01)01983-9
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20020110
Last Updated on STN: 20020110

AB Treatment of **organoboronic acids** with hydrofluoric acid generates an in situ tetracoordinate hydronium organotrifluoroborate species which undergoes counterion exchange with tetra-n-butylammonium hydroxide. The resultant tetraalkylammonium **salts** are as air and moisture stable as their potassium organotrifluoroborate counterparts with the added advantage of being readily soluble in organic media. They were found to undergo Pd-catalyzed Suzuki-Miyaura cross-couplings with a variety of aryl- and alkenylhalides under mild conditions. Their Pd-catalyzed cross-coupling with acid halides is also possible for the generation of ketones. .COPYRG. 2001 Published by Elsevier Science Ltd.

L20 ANSWER 11 OF 13 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 6
ACCESSION NUMBER: 1998188327 EMBASE
TITLE: Palladium-catalyzed carbonylative cross-coupling of organoboranes with hypervalent iodonium **salts**: Synthesis of aromatic ketones.
AUTHOR: Kang S.-K.; Lim K.-H.; Ho P.-S.; Yoon S.-K.; Son H.-J.
CORPORATE SOURCE: S.-K. Kang, Department of Chemistry, Sung Kyun Kwan University, Natural Science Campus, Suwon 440-746, Korea, Republic of
SOURCE: Synthetic Communications, (1998) Vol. 28, No. 8, pp. 1481-1489. .
Refs: 9
ISSN: 0039-7911 CODEN: SYNCAV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19980716
Last Updated on STN: 19980716

AB The cross-coupling reaction of **organoboronic acids** and carbon monoxide (1 atm) with aryl-, alkenyl-, and alkynyliodonium **salts** at room temperature afforded unsymmetric aromatic ketones in moderate yields.

L20 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:559430 CAPLUS
 DOCUMENT NUMBER: 115:159430
 TITLE: Preparation of boronic acid derivatives
 INVENTOR(S): Mueller, Richard H.
 PATENT ASSIGNEE(S): E. R. Squibb and Sons, Inc., USA
 SOURCE: U.S., 4 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5039795	A	19910813	US 1989-369390	19890621
CA 2040467	AA	19921016	CA 1991-2040467	19910415
CA 2040467	C	19990706		
EP 509161	A1	19921021	EP 1991-303333	19910416
EP 509161	B1	20011017		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 207073	E	20011115	AT 1991-303333	19910416
JP 06041167	A2	19940215	JP 1991-115737	19910521
JP 2905617	B2	19990614		

PRIORITY APPLN. INFO.: US 1989-369390 A 19890621
 EP 1991-303333 A 19910416

OTHER SOURCE(S): CASREACT 115:159430; MARPAT 115:159430

AB An improved process for the preparation of title compds. RB(OH)₂ (R = alkyl, alkenyl, cycloalkyl, alkoxyalkyl, etc.) or pharmaceutically acceptable salts is described. Thus, reaction of B(OCHMe₂)₃ with MeLi in Et₂O followed by hydrolysis with H₂O and HCl gave 92 mol % yield of MeB(OH)₂. These compds. are useful as intermediates in the preparation of boronic acid adducts of technetium-99m dioxime complexes, ^{99m}TcX(Y)₃Z (X = anion, Y = vicinal dioxime HON:CR₁CR₂:NOH, Z = boron derivative), which are useful as imaging agents.

L20 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1938:11671 CAPLUS
 DOCUMENT NUMBER: 32:11671
 ORIGINAL REFERENCE NO.: 32:1650a-f
 TITLE: Organoboron compounds. II. The reducing action of some organoboronic acids
 AUTHOR(S): Johnson, John R.; Van Campen, M. G., Jr.; Grummitt, Oliver
 SOURCE: Journal of the American Chemical Society (1938), 60, 111-15
 CODEN: JACSAT; ISSN: 0002-7863
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB One mol. of PhCH₂B(OH)₂ (I) reduces 0.965 mol. NH₄OH-Ag₂O with the production of 0.965 g.-atom Ag and 94% of (PhCH₂)₂. Slow autoxidation in the presence of H₂O produces PhCH₂OH. No appreciable hydrolysis occurs on refluxing I 3 hrs. with H₂O, 1% aqueous H₃BO₃ or 5% aqueous H₂SO₄; 5% NaOH rapidly

and quantitatively gives PhMe and H₃BO₃. Me₃CB(OH)₂ yields with SOCl₂ tert-butylboron oxide (II), b₅ 66-8°, m. about 20°; 1 mol. II gives 1.9 g.-atoms Ag; the by-product is mainly tert-BuOH; iso-C₄H₁₀, isobutylene and C₂Et₆ are also formed in small amts. 2-Iodofuran (III), through the Grignard reagent, gives 78% of 2-furanoboronic acid (IV), m. 110° (decomposition) or m. 121-2° (from C₆H₆ or PhMe), fairly stable in air; 3.5 g. IV, treated with AgNO₃ in neutral or NH₄OH solution, gives a bright orange precipitate of the Ag salt, hydrolyzed to 80% of furan; HgCl₂ at 25° gives 2-chloromercurifuran; CuCl₂ reacts slowly and after warming for 12 hrs. gives very small amts. of CuCl and 2-chlorofuran; CuBr₂ reacts rapidly, giving CuBr and 2-bromofuran; I gives III. 2-Thiopheneboronic acid (V) m. 134°; it is hydrolyzed at

50-60° by 6 N HCl or by refluxing with 20% NaOH, giving thiophene (VI). Aqueous AgNO₃ gives 73% VI, while NH₄OH-AgNO₃ gives 95% VI. Aqueous HgCl₂ (6%) gives 2-chloromercurithiophene. CuBr₂ gives a nearly quant. yield of the 2-Br derivative of VI; I in aqueous KI gives the 2-I derivative of VI. It is evident that differences in chemical behavior of aliphatic and aromatic boronic acids cannot be attributed merely to differences in the acidic strengths of the acids and that other factors are more significant. It is suggested that the reduction of NH₄OH-Ag₂O by aliphatic boronic acids involves the formation of an unstable Ag alkyl.

=> logoff h

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

214.06

368.68

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-35.25

-69.75

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 12:00:48 ON 02 FEB 2006

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1654MCG

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'BIOSIS, MEDLINE, EMBASE, CAPLUS'
AT 11:52:40 ON 02 FEB 2006
FILE 'BIOSIS' ENTERED AT 11:52:40 ON 02 FEB 2006
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	106.29	260.91
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-20.25	-54.75

=> "organoboron chemistry"
L14 26 "ORGANOBORON CHEMISTRY"

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15 22 DUP REM L14 (4 DUPLICATES REMOVED)

=> d ibib abs total

L15 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:590214 CAPLUS
TITLE: Organotrifluoroborates: Expanding **organoboron chemistry**
AUTHOR(S): Molander, Gary A.; Figueroa, Ruth
CORPORATE SOURCE: Roy and Diana Vagelos Laboratories Department of Chemistry, University of Pennsylvania, Philadelphia, PA, 19104-6323, USA
SOURCE: Aldrichimica Acta (2005), 38(2), 49-56
CODEN: ALACBI; ISSN: 0002-5100
PUBLISHER: Aldrich Chemical Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Unavailable
REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 22 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2005545482 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16220907
TITLE: Expanding **organoboron chemistry**:
epoxidation of potassium organotrifluoroborates.
AUTHOR: Molander Gary A; Ribagorda Maria
CORPORATE SOURCE: Roy and Diana Vagelos Laboratories, Department of Chemistry, University of Pennsylvania, Philadelphia, Pennsylvania 19104-6323, USA.. gmolandr@sas.upenn.edu

SOURCE: Journal of the American Chemical Society, (2003 Sep 17) 125
(37) 11148-9.
Journal code: 7503056. ISSN: 0002-7863.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; PUBMED-NOT-MEDLINE
ENTRY MONTH: 200512
ENTRY DATE: Entered STN: 20051014
Last Updated on STN: 20051218
Entered Medline: 20051214

L15 ANSWER 3 OF 22 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2003412403 EMBASE
TITLE: Carbon-carbon bond formation via boron mediated transfer.
AUTHOR: Persichini III P.J.
CORPORATE SOURCE: P.J. Persichini III, Department of Chemistry, Allegheny College, 433 Park Avenue, Meadville, PA 16335, United States. ppersich@allegheny.edu
SOURCE: Current Organic Chemistry, (2003) Vol. 7, No. 17, pp. 1725-1736. .
Refs: 111
ISSN: 1385-2728 CODEN: CORCFE
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20031030
Last Updated on STN: 20031030

AB **Organoboron chemistry** continues to make an ever-increasing impact on general methodology in synthetic organic chemistry. Over the recent years advances in the reduction, hydroboration, and coupling protocols have served to broaden the synthetic chemists' arsenal with methods illustrating the utility of boron. If one were to include boron enolate chemistry in conjunction with the previously mentioned areas this would encompass most of the literature related to **organoboron chemistry**. What remains paramount to the synthetic organic chemist are those synthetic methods that result in the formation of carbon-carbon bonds. With respect to **organoboron chemistry**, the most widely used methods (reduction and hydroboration) do not result in carbon-carbon bond formation. Although boron enolate chemistry and Suzuki based coupling reactions result in the formation of carbon-carbon bonds, it could be argued that boron is not directly involved in the formation of these bonds. However, there exists an area of **organoboron chemistry** that has been sporadically visited but has yet to be categorized. What is presented here is a review of the carbon-carbon bond forming reactions that are mediated through direct transfer of an appendage from boron to result in a new carbon-carbon bond. This review of boron mediated transfer reactions is not meant to be exhaustive, but it does span .apprx.40 years in an attempt to assemble a number of examples that best illustrate this category, and to provide a template for substantial expansion of this area.

L15 ANSWER 4 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:386178 BIOSIS
DOCUMENT NUMBER: PREV200100386178
TITLE: Preparation of radioiodinated (Z)-vinyl iodides via vinylboronates: **Organoboron chemistry** revisited.
AUTHOR(S): Kabalka, G. W. [Reprint author]; Akula, M. R. [Reprint author]; Zhang, J. H. [Reprint author]

CORPORATE SOURCE: Departments of Chemistry and Radiology, University of Tennessee, Knoxville, TN, 37996-1600, USA
SOURCE: Journal of Labelled Compounds and Radiopharmaceuticals, (May, 2001) Vol. 44, No. Supplement 1, pp. S942-S944. print.
Meeting Info.: Fourteenth International Symposium on Radiopharmaceutical Chemistry. Interlaken, Switzerland. June 10-15, 2001.
CODEN: JLCRD4. ISSN: 0362-4803.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Aug 2001
Last Updated on STN: 19 Feb 2002

L15 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:412958 CAPLUS
DOCUMENT NUMBER: 135:152581
TITLE: **Organoboron chemistry** on alumina: the Suzuki reaction
AUTHOR(S): Kabalka, G. W.; Pagni, R. M.; Hair, C. M.; Norris, J. L.; Wang, L.; Namboodiri, V.
CORPORATE SOURCE: Departments of Chemistry and Radiology, The University of Tennessee, Knoxville, TN, 37996-1600, USA
SOURCE: ACS Symposium Series (2001), 783(Organoboranes for Syntheses), 148-158
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB Review with 33 refs. A solventless Suzuki coupling reaction has been developed using both thermal and microwave enhancement. A potassium fluoride-alumina mixture is utilized along with palladium powder.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:274736 CAPLUS
DOCUMENT NUMBER: 125:33708
TITLE: Radical reactions in **organoboron chemistry**. III. Addition reactions to alkynylboranes as efficient routes to new regio- and stereodefined alkenyl diamino- and dialkoxyboranes
AUTHOR(S): Lhermitte, Frederic; Carboni, Bertrand
CORPORATE SOURCE: Groupe de Recherche de Physicochimie Structurale, Univ. de Rennes 1, Rennes, 35042, Fr.
SOURCE: Synlett (1996), (4), 377-379
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Thieme
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 125:33708
AB Functionalized alkenyl diamino- and dialkoxyboranes were produced regio- and stereoselectively through addition of heteroatom-centered radicals to the corresponding alkynes. For example, HC.tplbond.CB(NiPr2)2 underwent hydrostannation to give 95% of almost exclusively Z- or E-Bu3SnCR:CH[B(NiPr2)2] depending on conditions. The synthetic utility of these reactions was illustrated by the preparation of stereodefined Z- or E-alkenylboronic esters via Pd-catalyzed cross-coupling of the stannylated derivs.

L15 ANSWER 7 OF 22 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 95170606 EMBASE
DOCUMENT NUMBER: 1995170606
DUPLICATE 2

TITLE: Radical reactions in **organoboron chemistry** II - Inter- and intramolecular addition of carbon centered radicals to alkenylboranes.
AUTHOR: Guennouni N.; Lhermitte F.; Cochard S.; Carboni B.
CORPORATE SOURCE: Physicochimie Structurale, U.R.A., C.N.R.S., Avenue du General Leclerc, 35042 Rennes Cedex, France
SOURCE: Tetrahedron, (1995) Vol. 51, No. 25, pp. 6999-7018. .
ISSN: 0040-4020 CODEN: TETRAB
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 950707
Last Updated on STN: 950707
AB The intermolecular addition of carbon centered radicals to alkenylboranes has been studied. The influence of the olefin and boron substituents on the reactivity and the regioselectivity was determined. Competitive experiments were carried out to estimate the relative reactivity of a series of vinylboranes and other electron deficient alkenes. Intramolecular versions of these additions were also described as well as some further transformations of selected adducts.

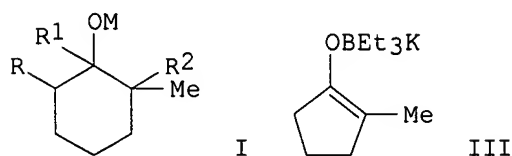
L15 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:906814 CAPLUS
DOCUMENT NUMBER: 124:86718
TITLE: Allylboranes: reductive mono- and trans-diallylation of aromatic nitrogen heterocyclic compounds
AUTHOR(S): Bubnov, Yu. N.
CORPORATE SOURCE: N. D. Zelinsky Inst. of Organic Chemistry, Russian Academy of Sciences, Moscow, 117913, Russia
SOURCE: Izvestiya Akademii Nauk, Seriya Khimicheskaya (1995), (7), 1203-16
CODEN: IASKEA
PUBLISHER: Nauka
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Russian
AB A review with 50 refs. on the reductive α -monoallylation of pyrrole, indole, quinolines, isoquinolines, and phenanthridine as well as the reductive trans- α, α' -diallylation of pyridines, 4,4'-bipyridines, pyrroles, and isoquinolines by allylic boranes. The reactions unite heterocyclic and **organoboron chemistries** on a novel level.

L15 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:458048 CAPLUS
DOCUMENT NUMBER: 107:58048
TITLE: After a third of a century in **organoboron chemistry**
AUTHOR(S): Koester, Roland
CORPORATE SOURCE: Max Planck Inst. Kohlenforsch., Muelheim an der Ruhr, D-4330, Fed. Rep. Ger.
SOURCE: Pure and Applied Chemistry (1987), 59(7), 907-14
CODEN: PACHAS; ISSN: 0033-4545
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An overview is given of the author's research in organoboron chemical since the early 1950's.

L15 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:167522 CAPLUS
DOCUMENT NUMBER: 108:167522
TITLE: Advances in **organoboron chemistry** -- prospects for industry
AUTHOR(S): Smith, Keith

CORPORATE SOURCE: Dep. Chem., Univ. Coll., Swansea, SA2 8PP, UK
SOURCE: Chemistry & Industry (London, United Kingdom) (1987),
(17), 603-11
CODEN: CHINAG; ISSN: 0009-3068
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 55 refs.

L15 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1983:470796 CAPLUS
DOCUMENT NUMBER: 99:70796
TITLE: **Organoboron chemistry**. Part 54.
Highly regioselective generation of thermodynamic
enolates and their direct characterization by NMR
AUTHOR(S): Negishi, Eiichi; Chatterjee, Sugata
CORPORATE SOURCE: Dep. Chem., Purdue Univ., West Lafayette, IN, 47907,
USA
SOURCE: Tetrahedron Letters (1983), 24(13), 1341-4
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Treatment of 2-methylcyclohexanone with 1.05 equiv $\text{KN}(\text{SiMe}_3)_2$ or KH in THF at -78° for 30 min followed by 1.25 equiv BEt_3 at -78° gave K enoxyborates I ($\text{M} = \text{BEt}_3\text{K}$; $\text{R}_1 = \text{bond}$, $\text{R}_2 = \text{H}$; $\text{R} = \text{H}$, $\text{R}_1\text{R}_2 = \text{bond}$) (II), resp., in 90-5% purity. Trimethylsilylation of II by Me_3SiCl gave I ($\text{M} = \text{SiMe}_3$, same R-R3) in 72 and 86% yield, resp. The enolates were characterized by NMR spectroscopy. Similar treatment of 2-methylcyclopentane and 2-heptanone with KH and BEt_3 gave enol III and $\text{BuCH:CMEOBEt}_3\text{K}$ in 91 and 85% yield, resp.

L15 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:620085 CAPLUS
DOCUMENT NUMBER: 95:220085
TITLE: Contributions to **organoboron chemistry**. XV. Aminodiphenylboranes
AUTHOR(S): Brown, Charles; Cragg, R. Harry; Miller, Tim J.;
Smith, David O.
CORPORATE SOURCE: Chem. Lab., Univ. Kent, Canterbury/Kent, CT2 7NH, UK
SOURCE: Journal of Organometallic Chemistry (1981), 217(2),
139-49
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 95:220085

AB The synthesis of a series of aminodiphenylboranes Ph_2BNRR_1 (e.g. $\text{R} = \text{R}_1 = \text{Me}$) is reported together with the results of a detailed study of their ^{13}C NMR spectra. All compds. exhibited peaks assignable to the C atom directly bonded to B when run under appropriate conditions. The ^{13}C spectra of primary aminodiphenylboranes provided further evidence for restricted rotation about the B-N bond.

L15 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:407368 CAPLUS

DOCUMENT NUMBER: 95:7368
TITLE: **Organoboron chemistry**
AUTHOR(S): Smith, K.; Paget, W. E.
CORPORATE SOURCE: Dep. Chem., Univ. Coll., Swansea, SA2 8PP, UK
SOURCE: Annual Reports on the Progress of Chemistry, Section B: Organic Chemistry (1979), Volume Date 1980, 76, 287-301
CODEN: CACBB4; ISSN: 0069-3030
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 155 refs. for 1974-9.

L15 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 1974:48062 CAPLUS
DOCUMENT NUMBER: 80:48062
TITLE: Rearrangements in **organoboron chemistry**
AUTHOR(S): Paetzold, Peter I.; Grundke, Hans
CORPORATE SOURCE: Inst. Anorg. Chem., Tech. Hochsch. Aachen, Aachen, Fed. Rep. Ger.
SOURCE: Synthesis (1973), (11), 635-60
CODEN: SYNTBF; ISSN: 0039-7881
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German
AB Review with 169 refs.

L15 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1971:64267 CAPLUS
DOCUMENT NUMBER: 74:64267
TITLE: Boron
AUTHOR(S): Matteson, Donald S.
CORPORATE SOURCE: Dep. Chem., Washington State Univ., Pullman, WA, USA
SOURCE: Organometallic Chemistry Reviews, Section B: Annual Surveys (1970), 6(2), 323-99
CODEN: OCRBAK; ISSN: 0030-512X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB Advances in **organoboron chemistry** during 1969 are reviewed with 283 refs.

L15 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1969:501905 CAPLUS
DOCUMENT NUMBER: 71:101905
TITLE: Boron. Annual survey covering the year 1968
AUTHOR(S): Matteson, Donald S.
CORPORATE SOURCE: Washington State Univ., Pullman, WA, USA
SOURCE: Organometallic Chemistry Reviews, Section B: Annual Surveys (1969), 5(1), 1-84
CODEN: OCRBAK; ISSN: 0030-512X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB The advances in **organoboron chemistry** during 1968 are reviewed in terms of the fields of carboranes and alkylboranes chemistry. Carboranes are discussed in terms of nomenclature, dicarbollide chemistry, icosahedral carboranes, and pentaborane and decaborane derivs. Alkyl and arylboranes are discussed in terms of nomenclature, hydroboration, trialkylboranes, C-B bond formation, C-functional boronic acids, deboronations, borazaro compds., B-N compds., boronic acids and esters, B halides, and borane-Lewis base complexes. 259 references.

L15 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:105268 CAPLUS
DOCUMENT NUMBER: 68:105268
TITLE: Development of organometallic chemistry in the USSR
AUTHOR(S): Okhlobystin, O. Yu.

SOURCE: Zhurnal Obshchei Khimii (1967), 37(11), 2376-92
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB A detailed historical review with 179 references through 1965 covering results of research in the USSR in the area of organometallic compds. as well as **organoboron chemistry**.

L15 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:443831 CAPLUS
DOCUMENT NUMBER: 67:43831
TITLE: Boron-carbon compounds
AUTHOR(S): Lappert, Michael F.
CORPORATE SOURCE: Univ. Sussex, Brighton, UK
SOURCE: Chem. Boron Its Compd. (1967), 443-616
CODEN: 16NTAF

DOCUMENT TYPE: Conference
LANGUAGE: English
AB An review of all significant aspects of **organoboron chemistry** is given. A attempt has been made to provide complete literature coverage up to the middle of 1964 and a more selective choice of contributions for 1964 to 1966. 1213 references.

L15 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:508137 CAPLUS
DOCUMENT NUMBER: 65:108137
ORIGINAL REFERENCE NO.: 65:20155e-f
TITLE: Studies in **organoboron chemistry**
AUTHOR(S): Reintjes, Marten
CORPORATE SOURCE: Univ. of California, Riverside
SOURCE: (1966) 146 pp. Avail.: Univ. Microfilms (Ann Arbor, Mich.), Order No. 66-7678
From: Diss. Abstr. B 27(2) 417-18
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L15 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:67000 CAPLUS
DOCUMENT NUMBER: 64:67000
ORIGINAL REFERENCE NO.: 64:12484f
TITLE: New concepts of **organoboron chemistry**
AUTHOR(S): Toporcer, Louis H.
CORPORATE SOURCE: Univ. of Cincinnati, Cincinnati, OH
SOURCE: (1966) 121 pp. Avail.: Univ. Microfilms (Ann Arbor, Mich.), Order No. 65-12,930
From: Dissertation Abstr. 26(7),3640
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L15 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:76143 CAPLUS
DOCUMENT NUMBER: 66:76143
TITLE: **Organoboron Chemistry**, Volume 2:
Boron-Nitrogen and Boron-Phosphorus Compounds
AUTHOR(S): Steinberg, Howard; Brotherton, Robert J.
SOURCE: (1966) Publisher: (Interscience: New York), 568 pp. \$25.
DOCUMENT TYPE: Book
LANGUAGE: English
AB Cf. CA 60, 14537g.

L15 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1964:82978 CAPLUS
DOCUMENT NUMBER: 60:82978
ORIGINAL REFERENCE NO.: 60:14537g
TITLE: **Organoboron Chemistry**. Volume 1.
Boron-Oxygen and Boron-Sulfur Compounds
AUTHOR(S): Howard, Steinberg
SOURCE: (1964)
PUBLISHER: Interscience (Div. of Wiley)
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Unavailable

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CA SUBSCRIBER PRICE	-34.50	-34.50

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L2 63 L1 (3A) SALT
L3 54 DUP REM L2 (9 DUPLICATES REMOVED)

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FULL ESTIMATED COST	154.41	154.62
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-34.50	-34.50

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=> boron or borate or "boronic acid"

L4 314471 BORON OR BORATE OR "BORONIC ACID"

=> chemistry or salt

L5 3135652 CHEMISTRY OR SALT

=> 14 and 15

L6 27453 L4 AND L5

=> 16 and review

L7 676 L6 AND REVIEW

=> dup rem 17

PROCESSING COMPLETED FOR L7

L8 649 DUP REM L7 (27 DUPLICATES REMOVED)

=> 14 (3a) 15

L9 3730 L4 (3A) L5

=> boron chemistry

L10 137 BORON CHEMISTRY

=> 110 and review

L11 30 L10 AND REVIEW

=> dup rem 111

PROCESSING COMPLETED FOR L11

L12 29 DUP REM L11 (1 DUPLICATE REMOVED)

=> d ibib abs total

L12 ANSWER 1 OF 29 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005059152 EMBASE

TITLE: Boron in the environment.

AUTHOR: Parks J.L.; Edwards M.

CORPORATE SOURCE: M. Edwards, Dept. of Civ. and Environ. Eng., Virginia Tech., Durham 418, Blacksburg, VA 24061, United States. edwardsm@vt.edu

SOURCE: Critical Reviews in Environmental Science and Technology, (2005) Vol. 35, No. 2, pp. 81-114. .

Refs: 142

ISSN: 1064-3389 CODEN: CRETEK

COUNTRY: United States

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 046 Environmental Health and Pollution Control

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 20050218

Last Updated on STN: 20050218

AB Boron has recently come to the attention of the U.S. Environmental Protection Agency as a possible contaminant worthy of regulation, but questions must still be addressed before a regulatory determination can take place. This article **reviews** current knowledge about boron as it pertains to water treatment and the environment so that informed decisions can be made regarding regulations and direction of future research. Specifically, this article summarizes **boron chemistry**, boron occurrence, health effects of boron, existing guidelines and regulations concerning boron, and methods for removing boron from drinking water.

L12 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:691732 CAPLUS

DOCUMENT NUMBER: 139:307834

TITLE: Nido-five-vertex clusters: In and out of **boron chemistry**

AUTHOR(S): Canac, Yves; Bertrand, Guy

CORPORATE SOURCE: UCR-CNRS Joint Research Chemistry Laboratory, UMR 2282, Department of Chemistry, University of

SOURCE: California, Riverside, CA, 92521-0403, USA
Angewandte Chemie, International Edition (2003),
42(31), 3578-3580
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:670829 CAPLUS
DOCUMENT NUMBER: 137:390373
TITLE: **Boron chemistry** lights the way:
Optical properties of molecular and polymeric systems
AUTHOR(S): Entwistle, Christopher D.; Marder, Todd B.
CORPORATE SOURCE: Department of Chemistry, University of Durham, Durham,
DH13LE, UK
SOURCE: Angewandte Chemie, International Edition (2002),
41(16), 2927-2931
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Electrooptical and electronic materials are the
subject of much research interest, whereby the focus has often been on
electron-rich organic mols. In the past years, new routes to
electron-deficient systems were developed that take advantage of the fact
that three-coordinate B is isoelectronic and isostructural with a pos.
charged carbocation, which allows neutral, p-type materials to be
synthesized directly. This mini-review summarizes recent work
on compds. with 3- and 4-coordinate B as well as B clusters, placing it in
the context of prior studies by the research groups of Williams and
Glowgowski, Kaim, Lequan, and Marder.
REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 29 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
ACCESSION NUMBER: 1997:199256 BIOSIS
DOCUMENT NUMBER: PREV199799498459
TITLE: **Review** of possible boron speciation relating to
its essentiality.
AUTHOR(S): Woods, William G.
CORPORATE SOURCE: Office Environmental Health Safety, Univ. California at
Riverside, Riverside, CA 92521, USA
SOURCE: Journal of Trace Elements in Experimental Medicine, (1996)
Vol. 9, No. 4, pp. 153-163.
CODEN: JTEMEM. ISSN: 0896-548X.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 May 1997
Last Updated on STN: 12 May 1997
AB Boron is one of the very few elements known to be essential in plants and
is yet to be unequivocally proven as essential in animals and humans.
Animal and human research on essentiality would benefit if the speciation
of boron in biological fluids and tissues could be determined. This is
complicated by the myriad of functional biomolecules with which inorganic
borates can react and by the exceedingly low concentrations of boron
present under physiological conditions. This review brings
together published literature on the interaction of boron with biochemical
systems which bear on the question of its essentiality. Some fundamentals
of **boron chemistry** that are germane to the issue of

speciation in living organisms are reviewed. Potential mechanisms of boron action in plants are discussed, with a view toward predicting effects in other organisms. Complexation with polyhydroxyl compounds, a well-known feature of **boron chemistry**, and interactions with enzymes, cofactors (NAD/NADP), and membranes are proposed as the most likely sites of boron involvement. Non-destructive techniques that might be utilized to directly study boron speciation in biological systems are discussed.

L12 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:234591 CAPLUS
DOCUMENT NUMBER: 120:234591
TITLE: **Boron chemistry**: its development
and recent achievements
AUTHOR(S): Hong, Fung E.; Chao, Pei Chi
CORPORATE SOURCE: Dep. Chem., Natl. Chung-Hsing Univ., Taichung, Taiwan
SOURCE: Huaxue (1993), 51(2), 203-13
CODEN: HUHSA2; ISSN: 0441-3768
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Chinese

AB A **review**, with >50 refs., is given on the development of B chemical from the very beginning of A. Stock's work through the renaissance in 1950 till recent achievements. B is unique in a sense that even though it belongs to main-group, still its bonding capacity and reactivity are very different from its neighboring main group element -- C. The study of B chemical naturally leads chemists to modify their conventional chemical bonding theories to be able to account for those B compds. with seemingly random structures. At the same time, it leads to the invention of high vacuum technique to be able to handle those extremely air-sensitive compds. The recent development of B chemical focuses on its unique bonding capacity with a variety of metal or main group elements to form new compds. with distinct yet versatile phys. and chemical properties. Its applications in industry as well as in medical therapy also show encouraging signs.

L12 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:484202 CAPLUS
DOCUMENT NUMBER: 119:84202
TITLE: The role of NMR in **boron chemistry**
AUTHOR(S): Reed, David
CORPORATE SOURCE: Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JJ, UK
SOURCE: Chemical Society Reviews (1993), 22(2), 109-16
CODEN: CSRVBR; ISSN: 0306-0012
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A **review** with 18 refs. on NMR spectroscopy of boron hydrides in structure studies.

L12 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:224540 CAPLUS
DOCUMENT NUMBER: 114:224540
TITLE: Exciting applications of **boron chemistry**
AUTHOR(S): Moore, Douglas E.
CORPORATE SOURCE: Dep. Pharm., Univ. Sydney, Sydney, 2006, Australia
SOURCE: Chemistry in Australia (1990), 57(10), 344-6
CODEN: CHAUDY; ISSN: 0312-8180
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A **review** with 12 refs. on 10B compds. for use in neutron capture therapy for the treatment of cancer.

L12 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1982:592170 CAPLUS
DOCUMENT NUMBER: 97:192170
TITLE: Research into **boron chemistry** at

the Institute of Inorganic Chemistry, Academy of Sciences, Latvian SSR
AUTHOR(S): Shvarts, E. M.
CORPORATE SOURCE: Inst. Neorg. Khim., Riga, USSR
SOURCE: Issled. Sint. Boratov (1981), 25-43. Editor(s): Gode, G. K. Latv. Gos. Univ.: Riga, USSR.
CODEN: 48QPAV
DOCUMENT TYPE: Conference; General Review
LANGUAGE: Russian
AB A review with 56 refs. on the thermal anal. of borates and complex B compds. with organic ligands, on the synthesis of complex B compds. with peroxy compds., and on the recovery of B compds. from aqueous solution

L12 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1979:131969 CAPLUS
DOCUMENT NUMBER: 90:131969
TITLE: Present-day trends in the development of **boron chemistry**

AUTHOR(S): Nikolaev, A. V.; Volkov, V. V.
CORPORATE SOURCE: Inst. Neorg. Khim., Novosibirsk, USSR
SOURCE: Boraty Boratnye Sist. (1978), 7-16. Editor(s): Slaidin, G. Ya. Izd. Zinatne: Riga, USSR.
CODEN: 40BNAW

DOCUMENT TYPE: Conference; General Review
LANGUAGE: Russian
AB A review with 34 refs.

L12 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1977:603751 CAPLUS
DOCUMENT NUMBER: 87:203751
TITLE: Recent results of **boron chemistry** in practice

AUTHOR(S): Szarvas, Pal
CORPORATE SOURCE: Szervetlen Kem. Tansz., Kossuth Lajos Tudományegyetem, Debrecen, Hung.
SOURCE: Magyar Kemikusok Lapja (1977), 32(3), 165-9
CODEN: MGKLAL; ISSN: 0025-0163

DOCUMENT TYPE: Journal; General Review
LANGUAGE: Hungarian
AB A review of industrial B uses with 24 refs.

L12 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:458910 CAPLUS
DOCUMENT NUMBER: 83:58910
TITLE: Other aspects of **boron chemistry**
AUTHOR(S): Cragg, R. H.
CORPORATE SOURCE: Univ. Kent, Canterbury, UK
SOURCE: MTP Int. Rev. Sci.: Inorg. Chem., Ser. Two (1975), Volume 1, 135-64. Editor(s): Lippert, M. F. Butterworth: London, Engl.
CODEN: 30PMAK

DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 319 refs.

L12 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:560194 CAPLUS
DOCUMENT NUMBER: 85:160194
TITLE: New results and aspects of **boron chemistry**
AUTHOR(S): Noeth, H.
CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Muenchen, Munich, Fed. Rep. Ger.
SOURCE: Plenary Main Sect. Lect. Int. Congr. Pure Appl. Chem., 24th (1974), Meeting Date 1973, Volume 4, 13-23.

Butterworth: London, Engl.
CODEN: 33DLAA
DOCUMENT TYPE: Conference; General Review
LANGUAGE: German
AB A review with .apprx.15 refs.

L12 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:120928 CAPLUS
DOCUMENT NUMBER: 76:120928
TITLE: Other aspects of **boron chemistry**
AUTHOR(S): Cragg, R. H.
CORPORATE SOURCE: Univ. Kent, Canterbury, UK
SOURCE: MTP (Med. Tech. Publ. Co.) Int. Rev. Sci.: Inorg.
Chem., Ser. One (1972), Volume 1, 185-220.
Editor(s): Lappert, M. F. Butterworths: London, Engl.
CODEN: 24NQA3
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 324 refs. with emphasis on B compds. containing
B-halogen, B-N, N-O, and B-S bonds.

L12 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1971:143864 CAPLUS
DOCUMENT NUMBER: 74:143864
TITLE: **Boron chemistry** in industrial
perspective
AUTHOR(S): Thompson, Raymond
CORPORATE SOURCE: Borax Res. Cent., Borax Consol. Ltd.,
Chessington/Surrey, UK
SOURCE: Chemistry in Britain (1971), 7(4), 140-4
CODEN: CHMBAY; ISSN: 0009-3106
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB The technol. important B compds. and the developments of the past 25 years
are reviewed. 14 refs.

L12 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1970:128169 CAPLUS
DOCUMENT NUMBER: 72:128169
TITLE: Elemental boron; preparation, properties, and
applications
AUTHOR(S): Bower, J. G.
CORPORATE SOURCE: U. S. Borax Res. Corp., Anaheim, CA, USA
SOURCE: Progress in Boron Chemistry (1970), 2, 231-71
CODEN: PBCHAZ; ISSN: 0079-6115
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 281 refs.

L12 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1970:526495 CAPLUS
DOCUMENT NUMBER: 73:126495
TITLE: Typical elements
AUTHOR(S): Adams, Christopher John; Downs, A. John; Cradock,
Stephen
CORPORATE SOURCE: Inorg. Chem. Lab., Oxford, UK
SOURCE: Annual Reports on the Progress of Chemistry, Section
A: General, Physical and Inorganic Chemistry (1970),
Volume Date 1969, 66, 217-307
CODEN: CSAAAE; ISSN: 0069-3022
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB The advances during 1969 in the chemistry of the typical elements of
Groups 0-VII are reviewed with 399 refs.

L12 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1970:420885 CAPLUS
DOCUMENT NUMBER: 73:20885
TITLE: Boron-nitrogen chemistry
AUTHOR(S): Noeth, Heinrich
CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Marburg, Marburg/Lahn, Fed.
Rep. Ger.
SOURCE: Progress in Boron Chemistry (1970), 3, 211-311
CODEN: PBCHAZ; ISSN: 0079-6115
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 329 refs.

L12 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:443831 CAPLUS
DOCUMENT NUMBER: 67:43831
TITLE: Boron-carbon compounds
AUTHOR(S): Lappert, Michael F.
CORPORATE SOURCE: Univ. Sussex, Brighton, UK
SOURCE: Chem. Boron Its Compd. (1967), 443-616
CODEN: 16NTAF
DOCUMENT TYPE: Conference
LANGUAGE: English
AB An **review** of all significant aspects of organoboron chemistry is given. A attempt has been made to provide complete literature coverage up to the middle of 1964 and a more selective choice of contributions for 1964 to 1966. 1213 references.

L12 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:453164 CAPLUS
DOCUMENT NUMBER: 67:53164
TITLE: Chemistry of boron-nitrogen compounds
AUTHOR(S): Niedenzu, Kurt; Dawson, John W.
CORPORATE SOURCE: Duke Univ., Durham, NC, USA
SOURCE: Chem. Boron Its Compd. (1967), 377-442
CODEN: 16NTAF
DOCUMENT TYPE: Conference
LANGUAGE: English
AB A **review** of boron-nitrogen compds. in which B-N dative bond, preparation and reactions of amino boranes, amine in boronium cations, the B:N double bond, diborylamines, hydrazinoboranes and azidoboranes, s-diazodiborines, 1,3,4-triaza-2,5-diborines, 1,2,4,5-tetraaza-3,6-diborines, borazines, 1,2,4,6-tetraaza-3,5,7-triborines, s-tetraazatetraborines, boron nitride azaboracycloalkanes, 1,2,3-benzodiazaborolidines and related compds. and heteroaromatic B-N compds. are discussed. 376 references.

L12 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:439642 CAPLUS
DOCUMENT NUMBER: 67:39642
TITLE: General introduction to **boron chemistry**
AUTHOR(S): Muettterties, Earl L.
CORPORATE SOURCE: du Pont de Nemours, E. I., and Co., Wilmington, DE, USA
SOURCE: Chem. Boron Its Compd. (1967), 1-24
CODEN: 16NTAF
DOCUMENT TYPE: Conference
LANGUAGE: English
AB A general discussion of bonding, stereochemistry, and reactivity in B and its compds.

L12 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:420895 CAPLUS
DOCUMENT NUMBER: 65:20895

ORIGINAL REFERENCE NO.: 65:3895d-e
TITLE: **Boron chemistry**. Organic analogs
of heterocycles
AUTHOR(S): Gerrard, W.
CORPORATE SOURCE: Northern Polytech., London
SOURCE: Chemistry & Industry (London, United Kingdom) (1966),
(21), 832-40
CODEN: CHINAG; ISSN: 0009-3068
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. CA 63, 18133c). A **review** covering the aspects of preparation,
properties, structure, and applications of B heterocyclic compds.: B-O
rings, B-O-N rings, rings containing N-B-O, N-B-N, B-O-N, N-B-C, the borazine
system, and B-C heterocycles. 71 references.

L12 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:498487 CAPLUS
DOCUMENT NUMBER: 63:98487
ORIGINAL REFERENCE NO.: 63:18133b-c
TITLE: The importance of recent trends in **boron
chemistry**
AUTHOR(S): Gerrard, W.
SOURCE: Scuola Azione (1965), (4), 166-92
DOCUMENT TYPE: Journal
LANGUAGE: Italian
AB Recent developments in B chemistry are reviewed. The topics covered are:
hydrides of B as reagents in organic chemistry with an explanation of the
products obtained in terms of the organoboron intermediates; the preparation of
halides of organoboron compds.; B halides as reagents for splitting
ethers; the effect of B bonded to olefins on the addition of HBr to the
double bond; boronitrogen compds. in organic reactions; heterocyclic compds.
of B with aromatic character; and B-containing polymers.

L12 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:24885 CAPLUS
DOCUMENT NUMBER: 64:24885
ORIGINAL REFERENCE NO.: 64:4569f
TITLE: A symposium on boron. Inorganic chemistry of boron
AUTHOR(S): Kodama, Goji
CORPORATE SOURCE: Tokyo Rika Univ.
SOURCE: Kagaku (Kyoto, Japan) (1964), 19(6), 511-18
CODEN: KAKYAU; ISSN: 0451-1964
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A **review** with 6 references.

L12 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:66776 CAPLUS
DOCUMENT NUMBER: 66:66776
TITLE: Chemistry of boron and its possibilities
AUTHOR(S): Proux, Yves
CORPORATE SOURCE: Lab. Chim. Macromol., C.N.R.S., Bellevue, Fr.
SOURCE: Double-Liaison (1963), No. 95, 25-33
CODEN: DOLIA8; ISSN: 0012-5709
DOCUMENT TYPE: Journal
LANGUAGE: French
AB A **review** of B chemistry, including polymerization of B compds. 20
references.

L12 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1962:21476 CAPLUS
DOCUMENT NUMBER: 56:21476
ORIGINAL REFERENCE NO.: 56:4070c
TITLE: Impact of recent developments in **boron
chemistry** on some scientific and engineering

problems
AUTHOR(S): Winternitz, Paul F.
CORPORATE SOURCE: New York Univ., NY
SOURCE: Advances in Chem. Ser. (1961), No. 32, 174-83
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A review.

L12 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1960:116353 CAPLUS
DOCUMENT NUMBER: 54:116353
ORIGINAL REFERENCE NO.: 54:22123i
TITLE: **Boron chemistry**
AUTHOR(S): Heal, H. G.
CORPORATE SOURCE: Queen's Univ., Belfast, Ire.
SOURCE: Roy. Inst. Chem. (London) Lectures, Monographs and
Repts. (1960), No. 1, 1-39
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A review with 258 references.

L12 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1958:111446 CAPLUS
DOCUMENT NUMBER: 52:111446
ORIGINAL REFERENCE NO.: 52:19635h-i
TITLE: Chemistry of boron. History, geochemistry, plants, and
atomic pile
AUTHOR(S): Muto, Satoru
CORPORATE SOURCE: Ministry Education, Japanese Govt., Tokyo
SOURCE: Kagaku no Ryoiki (1957), 11, 562-7
CODEN: KNRYAK; ISSN: 0022-2070
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A review.

L12 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1937:53007 CAPLUS
DOCUMENT NUMBER: 31:53007
ORIGINAL REFERENCE NO.: 31:7347h
TITLE: Twenty-five years study of **boron
chemistry**
AUTHOR(S): Stock, Alfred
SOURCE: Naturwissenschaften (1937), 25, 417-20
CODEN: NATWAY; ISSN: 0028-1042
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A review.

L12 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1926:15741 CAPLUS
DOCUMENT NUMBER: 20:15741
ORIGINAL REFERENCE NO.: 20:1925e-f
TITLE: Problems of the chemistry of boron
AUTHOR(S): Wahl, W. A.
SOURCE: Z. anorg. allgem. Chem. (1925), 146, 230-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A critical review of the literature. The quadrivalence of B has
not been pos. established by expts. The chemical behavior of B leads much
more to the idea that this element must act as ter- and quinquevalent,
like N. A fundamental difference lies in the fact that the univalent ion
of the quinquevalent B is an anion, while it is a cation in the case of N.

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NEWS 9 JAN 13 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 10 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
INPADOC
NEWS 11 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV
NEWS 13 JAN 30 Saved answer limit increased
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added to TULSA

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=> "boronic acid" or boronate
L1 11789 "BORONIC ACID" OR BORONATE

=> 11 3a salt
MISSING OPERATOR L1 3A
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> 11 (3a) salt
L2 63 L1 (3A) SALT

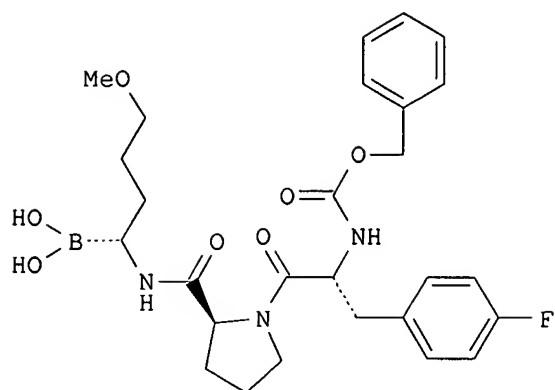
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PROCESSING COMPLETED FOR L2
L3 54 DUP REM L2 (9 DUPLICATES REMOVED)

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L3 ANSWER 1 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1004574 CAPLUS
DOCUMENT NUMBER: 143:306408
TITLE: Preparation of boronate medicaments for preventing
thrombosis during surgery
INVENTOR(S): Combe-Marzelle, Sophie Marie; Kakkar, Sanjay Kumar;
Allen, Graham Douglas
PATENT ASSIGNEE(S): Trigen Limited, UK
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005084686	A2	20050915	WO 2005-GB908	20050309
WO 2005084686	A3	20051201		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: GB 2004-5280 A 20040309
OTHER SOURCE(S): MARPAT 143:306408
GI



I

AB The use for the manufacture of a medicament for preventing unwanted coagulation during surgery, and particularly a Coronary Artery Bypass Graft (CABG) procedure, comprises **boronic acids and salts**, prodrugs and prodrug salts. E.g., I was prepared as well as salts such as Na, Ca and amino acid salts. Examples also were given for i.v. administration to humans and mitral valve repair.

L3 ANSWER 2 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1004573 CAPLUS

DOCUMENT NUMBER: 143:311969

TITLE: Boronate medicaments suitable for short duration anticoagulation

INVENTOR(S): Patrick, Guy Michael; Combe-Marzelle, Sophie Marie; Kennedy, Anthony James; Withington, Roger; Boucher, Oliver Vimpany Arnold

PATENT ASSIGNEE(S): Trigen Limited, UK

SOURCE: PCT Int. Appl., 114 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005084685	A2	20050915	WO 2005-GB907	20050309
WO 2005084685	A3	20051124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: GB 2004-5272 A 20040309

OTHER SOURCE(S): MARPAT 143:311969

AB An oral dosage form of a compound selected from boronic acids which have a neutral thrombin (P1) domain linked to a hydrophobic moiety capable of binding to the thrombin (S2) and (S3) subsites, and salts, prodrugs and prodrug salts of such acids, the dosage form comprising a solid phase formulation comprising the compound and being adapted for reconstitution of the formulation to form a liquid preparation

L3 ANSWER 3 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:158497 CAPLUS
 DOCUMENT NUMBER: 142:256727
 TITLE: Screening for heparanase-activating proteinases for use in the therapeutic degradation of heparans
 INVENTOR(S): Van-Gelder, Joel M.; Miron, Daphna
 PATENT ASSIGNEE(S): Insight Biopharmaceuticals Ltd., Israel
 SOURCE: PCT Int. Appl., 211 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005016227	A2	20050224	WO 2004-IL744	20040812
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2003-494800P P 20030814
 US 2004-535492P P 20040112

OTHER SOURCE(S): MARPAT 142:256727

AB Methods of screening for proteinases capable of activating heparanase by cleavage of propeptides are described. Modulation of heparanase activation may be useful in the treatment of disease associated with abnormal levels of heparans or other glycosaminoglycans, including neoplasms. Known proteinase are identified and known inhibitors and novel classes of compds. are identified as inhibitors of these enzymes. Inhibitors include compds. blocking the binding of the enzyme to the proteinase or to heparin; compds. interacting with heparin to block binding; inhibitors of cathepsins, serine proteinases or aspartic proteinases, and compds. preventing heparanase dimerization. Screening uses fluorogenic assay substrates including peptides known to be the target of heparanase activating proteinases in vivo including the dipeptides 109-glutamic acid-110-serine or 157-glutamine-158-lysine. Several cathepsins are identified as correctly cleaving and activating proheparanase in a heparin-dependent mechanism in which heparin binding induces a conformational change that makes the protein a substrate for the proteinase.

L3 ANSWER 4 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:735303 CAPLUS
 DOCUMENT NUMBER: 143:173146
 TITLE: Preparation of peptide **boronic acid salts** for use in anti-thrombotic pharmaceutical formulations
 INVENTOR(S): Madge, David Jonathan; Dolman, Mark; Walter, Armin; Krimmer, Dieter; Deadman, John Joseph; Olbrich, Alfred; Weiland-Waibel, Andrea M. t.
 PATENT ASSIGNEE(S): Trigen Limited, UK
 SOURCE: U.S. Pat. Appl. Publ., 65 pp., Cont.-in-part of U.S. Ser. No. 659,179.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005176651	A1	20050811	US 2004-937854	20040908
US 2004138175	A1	20040715	US 2003-658971	20030909
US 2004147453	A1	20040729	US 2003-659179	20030909
EP 1466916	A1	20041013	EP 2004-76510	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
EP 1466917	A1	20041013	EP 2004-76521	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003014450	A	20050726	BR 2003-14450	20030909
BR 2003014518	A	20050726	BR 2003-14518	20030909
EP 1561466	A2	20050810	EP 2004-76548	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005288253	A1	20051229	US 2003-659178	20030909
US 2005282757	A1	20051222	US 2005-78097	20050309
PRIORITY APPLN. INFO.:			GB 2002-20764	A 20020909
			GB 2002-20822	A 20020909
			GB 2003-7817	A 20030404
			GB 2003-11237	A 20030516
			GB 2003-15691	A 20030704
			US 2003-501718P	P 20030909
			US 2003-658971	A2 20030909
			US 2003-659178	A2 20030909
			US 2003-659179	A2 20030909
			US 2003-485786P	P 20030708
			EP 2003-255590	A3 20030909
			WO 2003-GB3887	W 20030909
			WO 2003-GB3897	W 20030909
			US 2004-937181	A2 20040908
			US 2004-937854	A2 20040908

OTHER SOURCE(S): MARPAT 143:173146

AB The invention relates to tripeptide boronic acids of (R,S,R) configuration, e.g., Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-B(OH)₂ (TRI 50c; Mpg = 3-methoxypropylglycine residue; Cbz = benzyloxycarbonyl), and their use to make base addition salts which are formulated into anti-thrombotic pharmaceutical formulations. Thus, TRI 50c pinacol ester and magnesium salt were prepared and their activities in a thrombin amidolytic assay shown in a figure. TRI 50c and novel products of the invention are effective in arterial as well as venous contexts.

L3 ANSWER 5 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1174322 CAPLUS

DOCUMENT NUMBER: 144:36173

TITLE: Copper-catalyzed cross- and carbonylative coupling reactions of alkynyliodonium salts with organoboronic acids and organostannanes

AUTHOR(S): Yu, Chan-Mo; Kweon, Jae-Hong; Ho, Pil-Su; Kang, Sin-Cheol; Lee, Gong Yeal

CORPORATE SOURCE: Department of Chemistry and Institute of Basic Sciences, Sungkyunkwan University, Suwon, 440-746, S. Korea

SOURCE: Synlett (2005), (17), 2631-2634

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Copper iodide-catalyzed cross- and carbonylative coupling of alkynyliodonium salts with arylboronic acids and organostannanes under the mild reaction conditions afforded arylacetylenes and aryl alkynyl ketones in high yields. Coupling of [R1C.tplbond.CI+Ph][BF4-] (1) with R2B(OH)₂ (2) catalyzed by 5 mol% of CuI in DME/DMF/H₂O (3:1:1) at 20° for 1

h gave 71-91% of R1C.tplbond.CR2 (3a-m; R1 = Bu, tBu, Ph; R2 = Ph, 4-MeOC6H4, 2,4-Cl2C6H3, 2-thienyl, 2-furyl, PhCH:CH). The same reaction in the presence of 1 atm of CO gave ketones R1C.tplbond.CCOR2 (5a-i; same R1, R2). Reaction of 1 with R2SnBu3 gave coupling products 3 (R1 = Bu, Ph, Me3Si; R2 = Ph, PhCH:CH, 4-MeOC6H4, 2-furyl). The alkynyliodonium tetrafluoroborates are more efficient in these coupling reactions than the corresponding iodonium triflates and tosylates.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1053111 CAPLUS

DOCUMENT NUMBER: 143:477665

TITLE: Palladium-catalyzed Suzuki-Miyaura reaction of aryl chlorides in aqueous media using tetrahydrodiazepinium salts as carbene ligands

AUTHOR(S): Ozdemir, Ismail; Gurbuz, Nevin; Gok, Yetkin; Cetinkaya, Engin; Cetinkaya, Bekir

CORPORATE SOURCE: Faculty of Science and Arts, Chemistry Department, Inonu University, Malatya, 44280, Turk.

SOURCE: Synlett (2005), (15), 2394-2396
CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A highly effective, easy to handle, and environmentally benign process for palladium-mediated Suzuki cross-coupling was developed. The in situ prepared three-component system of Pd(OAc)2, 1,3-dialkyltetrahydrodiazepinium chlorides (2a-e), and K2CO3 catalyzes quant. the Suzuki-Miyaura cross-coupling of deactivated aryl chloride.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:969021 CAPLUS

DOCUMENT NUMBER: 143:405656

TITLE: A simple copper salt-catalyzed synthesis of unsymmetrical diaryl selenides and tellurides from arylboronic acids with diphenyl diselenide and ditelluride

AUTHOR(S): Wang, Lei; Wang, Min; Huang, Fuping

CORPORATE SOURCE: Department of Chemistry, Huaibei Coal Teachers College, Huaibei, Anhui, 235000, Peop. Rep. China

SOURCE: Synlett (2005), (13), 2007-2010
CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the presence of a catalytic amount of simple copper salt, the reaction of aryl boronic acids with di-Ph diselenide and ditelluride was accomplished without any additive to afford the corresponding unsym. diaryl selenides and tellurides in good yields.

REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:143036 CAPLUS

DOCUMENT NUMBER: 140:181970

TITLE: Novel nickel-, palladium-, and platinum-carbene complexes for use as catalysts

INVENTOR(S): Karch, Ralf; Briel, Oliver; Kayser, Bernd; Beler, Matthias; Selvakumar, Kumaravel; Frisch, Anja; Zapf, Alexander

PATENT ASSIGNEE(S): Umicore Ag & Co. Kg, Germany

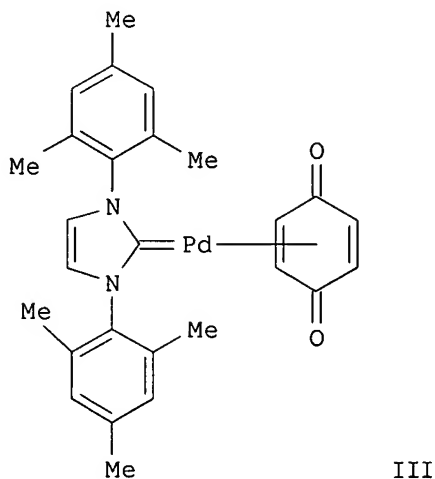
SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004014550	A2	20040219	WO 2003-EP8780	20030807
WO 2004014550	A3	20040805		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10236079	A1	20040226	DE 2002-10236079	20020807
DE 10308905	A1	20040909	DE 2003-10308905	20030228
CA 2494685	AA	20040219	CA 2003-2494685	20030807
EP 1526917	A2	20050504	EP 2003-784197	20030807
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005534711	T2	20051117	JP 2004-526904	20030807
PRIORITY APPLN. INFO.:				
			DE 2002-10236079	A 20020807
			DE 2003-10308905	A 20030228
			WO 2003-EP8780	W 20030807

GI



AB The title complexes, useful, e.g., in hydrosilylation, have the formula L_1ML_2 [M = Ni, Pd, Pt; L1 = ligand containing an electron-poor double bond; L2 = the carbenes I or II (R1-6 = a variety of organic groups)]. Adding 1.0

mmol 1,3-dimesitylimidazol-2-ylidene in THF to a suspension of 1.0 mmol (benzoquinone)Pd(cyclooctadiene) in THF at -78°, warming slowly to room temperature, and stirring for 2 h gave 85% complex III. Use of the complexes in the coupling of chlorobenzenes with styrene or alkyl acrylates, the coupling of diazonium salts with olefins, the Suzuki reaction of aryl halides or diazonium salts, arylation of ketones, and Buchwald-Hartwig amination is exemplified.

L3 ANSWER 9 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1152076 CAPLUS
DOCUMENT NUMBER: 142:76605
TITLE: Enzyme-containing liquid automatic dishwashing detergent
INVENTOR(S): Cho, Suk H.; Dillon, Kathy; Kurtz, James L.
PATENT ASSIGNEE(S): Melaleuca, Inc., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6835703	B1	20041228	US 2000-751047	20001229
PRIORITY APPLN. INFO.:			US 1999-173852P	P 19991230

AB A liquid automatic dishwashing detergent contains a detergent enzyme, has a pH value of less than 7.0, lacks phosphate builders, chlorine bleaches, and alkali, each of which is undesirable from the perspective of human and environmental safety. Such a liquid automatic dishwashing detergent comprises, by weight: (a) from about 0.05 percent to about 5.0 percent of at least one detergent enzyme, (b) from about 0.2 percent to about 5.0 percent of at least one xanthan gum, (c) from about 0.05 percent to about 5.0 percent of at least one low foaming nonionic surfactant, (d) from about 0.5 percent to about 30.0 percent of at least one non-phosphate detergent builder, and (e) from about 0.01 percent to about 30.0 percent of at least one enzyme stabilizer.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:198296 CAPLUS
DOCUMENT NUMBER: 140:229444
TITLE: **Boronic acid salts** and use thereof in the preparation of medicaments for treating thrombosis
INVENTOR(S): Madge, David Jonathan; Dolman, Mark; Combe-Marzelle, Sophie Marie; Deadman, John Joseph; Kennedy, Anthony James; Kakkar, Sanjay Kumar
PATENT ASSIGNEE(S): Trigen Limited, UK
SOURCE: Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396270	A1	20040310	EP 2003-255629	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
WO 2004022070	A1	20040318	WO 2003-GB3883	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,				

GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2004022071 A1 20040318 WO 2003-GB3887 20030909

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2004022072 A1 20040318 WO 2003-GB3897 20030909

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1400245 A1 20040324 EP 2003-255590 20030909

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

EP 1466916 A1 20041013 EP 2004-76510 20030909

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

EP 1466917 A1 20041013 EP 2004-76521 20030909

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2003014450 A 20050726 BR 2003-14450 20030909

BR 2003014518 A 20050726 BR 2003-14518 20030909

EP 1561466 A2 20050810 EP 2004-76548 20030909

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: GB 2002-20764 A 20020909
GB 2002-20822 A 20020909
GB 2003-7817 A 20030404
GB 2003-11237 A 20030516
GB 2003-15691 A 20030704
US 2003-485786P P 20030708
EP 2003-255590 A3 20030909
WO 2003-GB3887 W 20030909
WO 2003-GB3897 W 20030909

OTHER SOURCE(S): MARPAT 140:229444

AB Salts of a peptide boronic acid drug, for example of Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-B(OH)₂ are described. The counter-ion to the boronate may be an alkali metal or derived from an organic nitrogen-containing compound. The salts are used for the manufacture of a medicament for treating thrombosis.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:198295 CAPLUS

DOCUMENT NUMBER: 140:229443
 TITLE: **Boronic acid salts of**
 multivalent metals used in the preparation of a
 medicament for treating thrombosis
 INVENTOR(S): Madge, David Jonathan; Dolman, Mark; Combe-Marzelle,
 Sophie Marie; Deadman, John Joseph; Kennedy, Antony
 James; Kakkar, Sanjay Kumar; Chahwala, Suresh
 Babubhai; Boucher, Oliver Vimpany Arnold; Walter,
 Armin; Olbrich, Alfred; Krimmer, Dieter;
 Weiland-Weibel, Andrea Maria Theresia
 PATENT ASSIGNEE(S): Trigen Limited, UK
 SOURCE: Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 5
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1396269	A1	20040310	EP 2003-255604	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
WO 2004022070	A1	20040318	WO 2003-GB3883	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2004022071	A1	20040318	WO 2003-GB3887	20030909
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WO 2004022072	A1	20040318	WO 2003-GB3897	20030909
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
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EP 1400245	A1	20040324	EP 2003-255590	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
EP 1466916	A1	20041013	EP 2004-76510	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
EP 1466917	A1	20041013	EP 2004-76521	20030909
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

BR 2003014450	A	20050726	BR 2003-14450	20030909
BR 2003014518	A	20050726	BR 2003-14518	20030909
EP 1561466	A2	20050810	EP 2004-76548	20030909

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.:

GB 2002-20764	A	20020909
GB 2002-20822	A	20020909
GB 2003-7817	A	20030404
GB 2003-11237	A	20030516
GB 2003-15691	A	20030704
US 2003-485786P	P	20030708
EP 2003-255590	A3	20030909
WO 2003-GB3887	W	20030909
WO 2003-GB3897	W	20030909

OTHER SOURCE(S): MARPAT 140:229443

AB Salts of a pharmaceutically acceptable divalent metal and an organoboronic acid as selective thrombin inhibitors are described. Examples of such metals are calcium, magnesium and zinc. The organoboronic acid drug may be a boropeptide protease inhibitor. The salts may be formulated in oral dosage form, such as a capsule or compressed tablet.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 54 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
STN DUPLICATE 1

ACCESSION NUMBER: 2004:277265 BIOSIS

DOCUMENT NUMBER: PREV200400278556

TITLE: A mild and efficient new synthesis of aryl sulfones from
boronic acids and sulfinic acid
salts.

AUTHOR(S): Beaulieu, Christian [Reprint Author]; Guay, Daniel; Wang,
Zhaoyin; Evans, David. A.

CORPORATE SOURCE: Dept Med Chem, Merck Frosst Ctr Therapeut Res, POB 1005,
Pointe Claire, PQ, H9R 4P8, Canada
christian_beaulieu@merck.com

SOURCE: Tetrahedron Letters, (April 12 2004) Vol. 45, No. 16, pp.
3233-3236. print.
CODEN: TELEAY. ISSN: 0040-4039.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 9 Jun 2004

Last Updated on STN: 9 Jun 2004

AB A new efficient and mild preparation of sulfones from **boronic acids** and sulfinic acid **salts** is reported. The cross-coupling reaction mediated by cupric acetate gives access to a variety of sulfones in excellent yield. Copyright 2004 Elsevier Ltd. All rights reserved.

L3 ANSWER 13 OF 54 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights
reserved on STN DUPLICATE 2

ACCESSION NUMBER: 2004304676 EMBASE

TITLE: Microwave-assisted copper promoted N-arylation of amines
with aryl **boronic acids/salts**
on a KF-alumina surface.

AUTHOR: Das P.; Basu B.

CORPORATE SOURCE: B. Basu, Department of Chemistry, North Bengal University,
Darjeeling 734 430, India. basu_nbu@indiatimes.com

SOURCE: Synthetic Communications, (2004) Vol. 34, No. 12, pp.
2177-2184. .

Refs: 33

ISSN: 0039-7911 CODEN: SYNCAV

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040805
Last Updated on STN: 20040805

AB An experimentally simple microwave-assisted solvent-free N-arylation of primary amines with sodium tetraphenylborate or arylboronic acids, promoted by inexpensive cupric acetate, on the surface of KF-alumina is reported. The reaction is selective for mono-N-arylation, and a variety of functional groups are tolerated in the process.

L3 ANSWER 14 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:434694 CAPLUS
DOCUMENT NUMBER: 141:156674
TITLE: A simple copper salt catalyzed N-arylation of amines, amides, imides, and sulfonamides with arylboronic acids
AUTHOR(S): Lan, Jing-Bo; Zhang, Guo-Lin; Yu, Xiao-Qi; You, Jing-Song; Chen, Li; Yan, Mei; Xie, Ru-Gang
CORPORATE SOURCE: Department of Chemistry, Sichuan University, Chengdu, 610064, Peop. Rep. China
SOURCE: Synlett (2004), (6), 1095-1097
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:156674

AB A simple copper salt catalyzed N-arylation reaction with arylboronic acids is reported. In the presence of a catalytic amount of copper(II) acetate, the coupling of arylboronic acids with imides, such as succinimide and phthalimide, was performed in MeOH to give the corresponding N-arylimides in excellent yields. A variety of primary aromatic and aliphatic amines, amides and sulfonamides was also successfully coupled with phenylboronic acid to give the corresponding N-phenylated products in moderate yields.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:397081 CAPLUS
DOCUMENT NUMBER: 138:397219
TITLE: Detection of nucleic acid sequences by hybridization and cleavage of hybrids to release sequences labeled with affinity and electrophoretic mobility tags
INVENTOR(S): Chenna, Ahmed; Singh, Sharat
PATENT ASSIGNEE(S): Aclara Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 200 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 32
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003042658	A2	20030522	WO 2002-US35893	20021108
WO 2003042658	A3	20031204		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

US 2004096825	A1	20040520	US 2001-11201	20011109
US 2005053939	A1	20050310	US 2004-494879	20040507
PRIORITY APPLN. INFO.:			US 2001-11201	A2 20011109
			US 2001-337982P	P 20011109
			US 1999-303029	A2 19990430
			US 2000-561579	A2 20000428
			US 2000-602586	A2 20000621
			US 2000-684386	B2 20001004
			US 2000-698846	A2 20001027
			WO 2002-US35893	W 20021108

OTHER SOURCE(S): MARPAT 138:397219

AB Probe sets for the simultaneous detection of multiple sequences in a complex nucleic acid sample are described. The method uses pairs of probes that will hybridize to one another to form a cleavable structure when their target sequences are in a defined relationship. Cleavage of the structure releases a sequence that includes a moiety that alters the electrophoretic mobility of the released sequence and a moiety that can be used as an affinity label for rapid enrichment of cleavage products. In a multiplexed assay, different released e-tag reporters may be separated and detected providing for target identification. The probes comprise interactive functionalities adjacent the cleaved portion positioned in the probes such that the interactive functionality does not form part of the e-tag reporters. Also described are biopolymers and nucleosides containing such interactive functionalities.

L3 ANSWER 16 OF 54 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 2003536523 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14618572
TITLE: Modern synthetic methods for copper-mediated C(aryl)[bond]O, C(aryl)[bond]N, and C(aryl)[bond]S bond formation.
AUTHOR: Ley Steven V; Thomas Andrew W
CORPORATE SOURCE: Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, England.
SOURCE: Angewandte Chemie (International ed. in English), (2003 Nov 17) 42 (44) 5400-49.
JOURNAL CODE: 0370543. ISSN: 0570-0833.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; PUBMED-NOT-MEDLINE
ENTRY MONTH: 200411
ENTRY DATE: Entered STN: 20031118
Last Updated on STN: 20041117
Entered Medline: 20041116

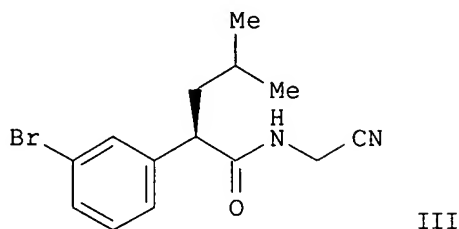
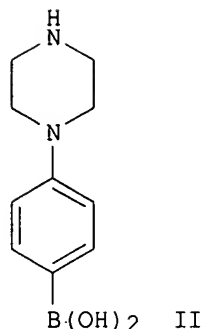
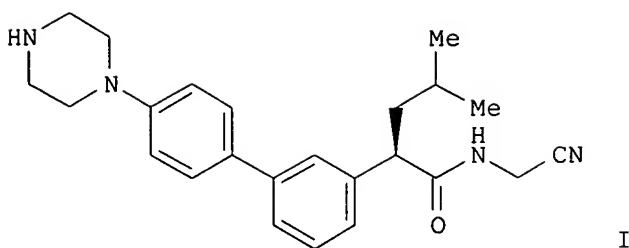
AB The copper-mediated C(aryl)[bond]N, C(aryl)[bond]O, and C(aryl)[bond]S bond formation is an important transformation and has been developed to include a wide range of substrates. This Review highlights the recent developments in the copper-mediated (both stoichiometric and catalytic) reactions of aryl **boronic acids**, aryl halides, iodonium **salts**, siloxanes, stannanes, plumbanes, bismuthates, and trifluoroborate salts as aryl donors. In particular, the recent introduction of boronic acids as reaction partners in both O- and N-arylation has been a significant discovery and will occupy centre-stage in this review. Clear improvements can be obtained by the correct choice of copper source, base, ligands, and other additives. Mechanistic investigations should provide insight into the catalytically active species, which would aid in the development of milder, more-efficient methods.

L3 ANSWER 17 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:957976 CAPLUS
DOCUMENT NUMBER: 140:27622
TITLE: Novel substrates for palladium-catalyzed coupling reactions of arenes

AUTHOR(S): Zapf, Alexander
CORPORATE SOURCE: Leibniz-Institut fuer Organische Katalyse,
Universitaet Rostock e.V. (IfOK), Rostock, 18055,
Germany
SOURCE: Angewandte Chemie, International Edition (2003),
42(44), 5394-5399
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Arenes and heteroarenes are ubiquitous substructures in biol.
active agents and new materials. Thus, functionalization ("refinement")
of simple arene precursors is still of major importance for preparative
organic chemical. During the last 20 yr, especially transition-metal-catalyzed
cross-coupling reactions of aryl halides and triflates have given arene
chemical new impetus. The first industrial applications were realized a few
years ago. Quite recently, carbonic acid derivs. such as anhydrides and
esters have added to the scope of substrates for these coupling reactions.
Some recent developments in this area are presented in this Minireview.
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:170596 CAPLUS
DOCUMENT NUMBER: 138:321245
TITLE: Practical Asymmetric Synthesis of a Potent Cathepsin K
Inhibitor. Efficient Palladium Removal Following
Suzuki Coupling
AUTHOR(S): Chen, Cheng-yi; Dagneau, Philippe; Grabowski, Edward
J. J.; Oballa, Renata; O'Shea, Paul; Prasit, Peppi;
Robichaud, Joeel; Tillyer, Rich; Wang, Xin
CORPORATE SOURCE: Department of Process Research and Department of
Medicinal Chemistry, Merck Frosst Centre for
Therapeutic Research, Pointe-Claire-Dorval, QC, H9R
4P8, Can.
SOURCE: Journal of Organic Chemistry (2003), 68(7), 2633-2638
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:321245
GI



AB Nonracemic piperazinobiphenylpentanoylamino acetonitrile I, a potent and selective cathepsin K inhibitor, is prepared on large (multikilogram) scale with the use of chromatog. from the hydrochloride **salt** of **boronic acid** II and nonracemic benzenepentanoic acid III. II is prepared by Boc-protection of 1-(4-bromophenyl)piperazine followed by lithium-bromine exchange, addition of triisopropyl borate, cleavage of the Boc group. Nonracemic III is prepared by alkylation of 3-bromophenylacetic acid followed by conversion to the acid chloride and treatment with base to yield a ketene in situ; addition of (R)-pantolactone to the ketene with asym. protonation, hydrolysis of the ester with lithium hydroxide and hydrogen peroxide without racemization, and recrystn. with (R)- α -methylbenzylamine and acidification provides nonracemic III. Suzuki coupling of the hydrochloride of boronic acid II and nonracemic bromophenylpentanoylamino acetonitrile III provides nonracemic I. Suzuki coupling of N-Boc protected II with III yields Boc-protected I, but attempted cleavage of the Boc group gives the desired product contaminated with an acetamide impurity derived from acidic hydrolysis of the nitrile which could only be removed by chromatog. Residual palladium and iron in the product, derived from the Pd(dppf)Cl₂ catalyst used in the Suzuki coupling, are efficiently removed from crude I by a simple extractive workup with tributylphosphine and lactic acid.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:555500 CAPLUS

DOCUMENT NUMBER: 137:109373

TITLE: Preparation of serine protease inhibitors comprising a non-peptide boronate or other hydrogen-bond acceptor

INVENTOR(S): Deadman, John Joseph; Spencer, John; Greenidge, Paulette Angela; Goodwin, Christopher Andrew; Kakkar, Vijay Vir; Scully, Michael Finbarr

PATENT ASSIGNEE(S): Trigen Limited, UK

SOURCE: PCT Int. Appl., 117 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057273	A1	20020725	WO 2002-GB224	20020118
WO 2002057273	C2	20021128		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2004235792	A1	20041125	US 2003-466736	20031218
PRIORITY APPLN. INFO.:			GB 2001-1537	A 20010120
			US 2001-267172P	P 20010206
			WO 2002-GB224	W 20020118

OTHER SOURCE(S): MARPAT 137:109373

AB X-Ar-LJ (I; e.g. isothiuronium salts 2-(2-((carbamimidoylthio)methyl)phenyl)-4,4,5,5-tetramethyl-1,3,2-dioxaborolane hydrobromide and 3-nitrobenzyl carbamimidothioate hydrobromide) are useful as protease inhibitors. In I, Ar is a ring or ring system, for example a benzene ring, and may be substituted by one or more moieties in addition to X and LJ; X is a functional group which is a H bond acceptor, e.g. a nitro or boronate group BY1Y2; L is a linker, most preferably (CR5R6)-S-; J is a moiety containing a basic N atom but not containing an amino acid residue, preferably amidino, guanidino, amino, carboxamido, hydroxylamino, or imidazolyl, or an N-substituted analog thereof. Enzyme inhibition activities for some of the claimed compds. for up to 6 enzymes (plasmin, thrombin, trypsin, factor IX, factor X, urokinase) are reported. Several methods of preparation are claimed and 31 preps. are included.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:172410 CAPLUS

DOCUMENT NUMBER: 136:233658

TITLE: Radiation-curable compositions containing alkenyl ether-functional polyisobutylenes, mixing to manufacture coating composition, and cured coatings
INVENTOR(S): Bahadur, Maneesh; Perz, Susan Victoria; Suzuki, Toshio
PATENT ASSIGNEE(S): Dow Corning Corp., USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U. S. Ser. No. 569,283.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002028303	A1	20020307	US 2001-940153	20010827
US 6706779	B2	20040316		
US 6703433	B1	20040309	US 2000-569283	20000512
PRIORITY APPLN. INFO.:			US 2000-569283	A2 20000512

AB The title compns. comprise an alkenyl ether-functional polyisobutylene, a cationic photoinitiator, and a miscible reactive diluent selected from di and monofunctional vinyl ether compds., epoxy functional compds., or acrylate compds. R8Xb, where R8 is a nonsilicon containing organic group, X is an

organic group containing ≥ 1 acrylate functional group, and $b = 2-4$. The radiation curable compns. exhibit a low cure energy, have a high moisture vapor barrier, high damping characteristics, and a high refractive index, and provide a barrier to corrosive vapors and have maintained or enhanced modulus, tensile strength, and toughness.

L3 ANSWER 21 OF 54 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2002409525 EMBASE
 TITLE: Palladium-imidazolium-catalyzed carbonylative coupling of aryl diazonium ions and aryl boronic acids.
 AUTHOR: Andrus M.B.; Ma Y.; Zang Y.; Song C.
 CORPORATE SOURCE: M.B. Andrus, Brigham Young University, Department of Chemistry, C100 BNSN, Provo, UT 84602-5700, United States. mbandrus@chem.byu.edu
 SOURCE: Tetrahedron Letters, (9 Dec 2002) Vol. 43, No. 50, pp. 9137-9140. .
 Refs: 21
 ISSN: 0040-4039 CODEN: TELEAY
 PUBLISHER IDENT.: S 0040-4039(02)02186-X
 COUNTRY: United Kingdom
 DOCUMENT TYPE: Journal; Article
 FILE SEGMENT: 029 Clinical Biochemistry
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 ENTRY DATE: Entered STN: 20021205
 Last Updated on STN: 20021205

AB Palladium(II) acetate and N,N-bis-(2,6-diisopropylphenyl)dihydroimidazolium chloride (2 mol%) were used to catalyze the carbonylative coupling of aryl diazonium tetrafluoroborate **salts** and aryl **boronic acids** to form aryl ketones. Optimal conditions include carbon monoxide (1 atm) in 1,4-dioxane at 100°C for 5 h. Yields for unsymmetrical aryl ketones ranged from 76 to 90% for isolated materials with only minor amounts of biaryl coupling product observed (2-12%).
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L3 ANSWER 22 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:851267 CAPLUS
 DOCUMENT NUMBER: 136:7764
 TITLE: Radiation curable compositions containing alkenyl ether functional polyisobutylenes
 INVENTOR(S): Bahadur, Maneesh; Perz, Susan; Suzuki, Toshio
 PATENT ASSIGNEE(S): Dow Corning Corporation, USA
 SOURCE: PCT Int. Appl., 27 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001088003	A1	20011122	WO 2001-US12543	20010417
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6703433	B1	20040309	US 2000-569283	20000512
EP 1297040	A1	20030402	EP 2001-927147	20010417
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003533564 T2 20031111 JP 2001-585220 20010417
PRIORITY APPLN. INFO.: US 2000-569283 A 20000512
WO 2001-US12543 W 20010417

AB This invention relates to radiation curable compns. comprising an alkenyl ether functional polyisobutylene, a cationic photoinitiator, and a miscible reactive diluent selected from specified organic vinyl ether compds. or compds. having the formula R8Xb, wherein R8 is a non-silicon containing organic group, X is an organic group containing at-least one acrylate functional group, and b has a value of 1-3. The radiation curable compns. exhibit a low cure energy, have a high moisture vapor barrier, high damping characteristics, and a high refractive index, and provide a barrier to corrosive vapors and have maintained or enhanced modulus, tensile strength, and toughness.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 23 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:44225 CAPLUS
DOCUMENT NUMBER: 136:70297
TITLE: Preparation of conjugated polymers by salt elimination reaction for use in optical devices
INVENTOR(S): O'Dell, Richard; Towns, Carl Robert
PATENT ASSIGNEE(S): Cambridge Display Technology Limited, UK
SOURCE: Brit. UK Pat. Appl., 19 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2360291	A1	20010919	GB 2000-6380	20000316

PRIORITY APPLN. INFO.: GB 2000-6380 20000316
AB A process for preparing a conjugated polymer comprises the polymerization by the elimination of a halide group and a boronate group in a single phase system of (1) a cation salt of an aromatic diboronate monomer and a aromatic dihalide monomer having ≥ 2 reactive halide functional groups, or (2) a cation salt of an aromatic boronate monomer having a reactive halide functional group. The conjugated polymer can be used to produce an optical device such as electroluminescent device.

L3 ANSWER 24 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:657482 CAPLUS
DOCUMENT NUMBER: 135:211144
TITLE: Procedure for the production of dimethylaminoborane
INVENTOR(S): Holzner, Christoph; Bertram, Horst; Dahmen, Hans; Wagner, Alfred; Grizan, Rosemarie
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10009910	A1	20010906	DE 2000-10009910	20000301

PRIORITY APPLN. INFO.: DE 2000-10009910 20000301
AB The present invention concerns a procedure for the production of highly pure dimethylamine-borane adduct for the printed circuit board manufacturing through

conversion of sodium boronate with dimethylammonium salt
and a subsequently processing of the reaction mixture

L3 ANSWER 25 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:905501 CAPLUS
DOCUMENT NUMBER: 136:309948
TITLE: Synthesis and cross-coupling reactions of
tetraalkylammonium organotrifluoroborate salts
AUTHOR(S): Batey, Robert A.; Quach, Tan D.
CORPORATE SOURCE: Department of Chemistry, University of Toronto,
Toronto, ON, M5S 3H6, Can.
SOURCE: Tetrahedron Letters (2001), 42(52), 9099-9103
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:309948

AB Treatment of organoboronic acids with HF generated an in situ
tetracoordinate hydronium organotrifluoroborate species [PhBF₃][H₃O] which
underwent counterion exchange with [Bu₄N][OH]. The resultant
tetraalkylammonium salts (I) are as air and moisture stable as their K
organotrifluoroborate counterparts with the added advantage of being
readily soluble in organic media. I underwent Pd-catalyzed Suzuki-Miyaura
cross-couplings with a variety of aryl- and alkenyl halides under mild
conditions. E.g., reaction of PhB(OH)₂ with 3 equiv HF at room temperature for
1 h in H₂O generated [PhBF₃][H₃O] which after counterion exchange with
[Bu₄N][OH] gave [PhBF₃][Bu₄N] (II) in 95% yield. II then underwent
Pd-catalyzed Suzuki-Miyaura cross-coupling with PhI at room temperature (12 h)
in presence of Pd(OAc)₂/dppb catalyst and Cs₂CO₃ dissolved in DME/H₂O
(1:1) to give PhPh in quant. yield. Their Pd-catalyzed cross-coupling
with acid halides was also possible for the generation of ketones. E.g.,
Pd-catalyzed cross-coupling of [Bu₄N][C₆H₁₃CH:CHBF₃] with p-AcC₆H₄Br under
similar conditions to those above except at 50° over 24 h gave
p-(C₆H₁₃CH:CH)C₆H₄Ac in 87% yield.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 26 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:452347 CAPLUS
DOCUMENT NUMBER: 133:89798
TITLE: Preparation of peptidyl boronic ester and acid
compounds as proteasome inhibitors
INVENTOR(S): Adams, Julian; Ma, Yu-Ting; Stein, Ross; Baevsky,
Matthew; Grenier, Louis; Plamondon, Louis
PATENT ASSIGNEE(S): Leukosite, Inc., USA
SOURCE: U.S., 38 pp., Cont.-in-part of U.S. Ser. No. 330,525,
abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6083903	A	20000704	US 1995-442581	19950516
CA 2203936	AA	19960509	CA 1995-2203936	19951027
CA 2203936	C	20050412		
CA 2496538	AA	19960509	CA 1995-2496538	19951027
WO 9613266	A1	19960509	WO 1995-US14117	19951027

W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES,
FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU,
LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
SI, SK
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE,

IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,
NE, SN, TD, TG

AU 9641398	A1	19960523	AU 1996-41398	19951027
AU 710564	B2	19990923		
ZA 9509119	A	19960527	ZA 1995-9119	19951027
EP 788360	A1	19970813	EP 1995-939670	19951027
EP 788360	B1	20030528		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CN 1168633	A	19971224	CN 1995-196590	19951027
US 5780454	A	19980714	US 1995-549318	19951027
JP 10510245	T2	19981006	JP 1996-514834	19951027
JP 3717934	B2	20051116		
NZ 337211	A	20001222	NZ 1995-337211	19951027
IL 115790	A1	20021201	IL 1995-115790	19951027
EP 1312609	A1	20030521	EP 2003-4280	19951027
EP 1312609	B1	20051228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 241631	E	20030615	AT 1995-939670	19951027
PT 788360	T	20031031	PT 1995-939670	19951027
ES 2199257	T3	20040216	ES 1995-939670	19951027
IL 133831	A1	20040328	IL 1995-133831	19951027
IL 137726	A1	20040831	IL 1995-137726	19951027
FI 9701746	A	19970606	FI 1997-1746	19970423
NO 9701929	A	19970612	NO 1997-1929	19970425
NO 310558	B1	20010723		
HK 1002059	A1	20030905	HK 1998-100951	19980207
US 6066730	A	20000523	US 1998-85404	19980526
US 6297217	B1	20011002	US 2000-490511	20000125
US 6465433	B1	20021015	US 2001-953540	20010914
US 2002173488	A1	20021121	US 2002-100295	20020318
US 6548668	B2	20030415		
US 6617317	B1	20030909	US 2002-125997	20020419
US 2003199561	A1	20031023	US 2003-392165	20030319
US 6747150	B2	20040608		
US 2004167332	A1	20040826	US 2003-730231	20031208

PRIORITY APPLN. INFO.:

US 1994-330525	B2	19941028
US 1995-442581	A	19950516
CA 1995-2203936	A3	19951027
EP 1995-939670	A3	19951027
IL 1995-115790	A3	19951027
NZ 1995-296717	A1	19951027
US 1995-549318	A3	19951027
WO 1995-US14117	W	19951027
US 1998-85404	A3	19980526
US 2000-490511	A1	20000125
US 2001-953540	A1	20010914
US 2002-100295	A1	20020318
US 2002-125997	A1	20020419
US 2003-392165	A1	20030319

OTHER SOURCE(S): MARPAT 133:89798

AB Peptidyl boronic acid and ester compds. P-NRCHR2-X2-CHR3BZ1Z2 [P = 2- or 8-quinolinyl-, 2-quinoxalinylnyl-, 2- or 3-pyridyl-, piperazinyl-, 3-furanyl-, or 3-pyrrolylcarbonyl, or -sulfonyl, or morpholinylcarbonyl; X2 = CONH, CH2NH, CH(OH)CH2, CH(OH)CH(OH), CH(OH)CH2NH, CH:CH, COCH2, SO2NH, SO2CH2, or CH(OH)CH2CONH; R = H or alkyl; R2, R3 = H, alkyl, cycloalkyl, aryl, heterocyclyl, CH2-R5 (R5 = aryl, aralkyl, alkaryl, cycloalkyl, heterocyclyl) or alkyl-chalcogen; Z1, Z2 = alkyl, hydroxy, alkoxy, aryloxy, or together form a dihydroxy compound] were prepared as proteasome inhibitors. Thus, coupling of (1S,2S,3R,5S)-pinanediol leucine boronate trifluoroacetate salt with N-Boc-β-(1-naphthyl)-L-alanine, followed by deprotection, acylation with 4-morpholinylcarbonyl chloride and cleavage of the pinanediol moiety afforded N-(4-morpholine)carbonyl-β-(1-naphthyl)-L-alanine-L-leucine boronic acid [MG-273], which inhibited 20S proteasome with Ki = 0.18 nM.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:362655 CAPLUS
DOCUMENT NUMBER: 133:5949
TITLE: Radiation curable compositions containing alkenyl ether functional polyisobutylenes
INVENTOR(S): Bahadur, Maneesh; Suzuki, Toshio
PATENT ASSIGNEE(S): Dow Corning Asia, Ltd., Japan; Dow Corning Corporation
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6069185	A	20000530	US 1998-199261	19981125
EP 1004605	A1	20000531	EP 1999-309151	19991117
EP 1004605	B1	20031203		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000159848	A2	20000613	JP 1999-332929	19991124
KR 2000035643	A	20000626	KR 1999-52379	19991124
PRIORITY APPLN. INFO.:			US 1998-199261	A 19981125

AB A composition having low cure energy and good moisture vapor barrier, damping characteristics, refractive index, for providing a barrier to corrosive vapors comprises an alkenyl ether functional polyisobutylene, a cationic photoinitiator, a free radical photoinitiator, and an alkenyl ether compound which is free of isobutylene units and optionally an alkylphenol or hydrocarbon silicone alkenyl ether compds. Thus, a polymer was prepared from 50 g Epion 200A (allyl telechelic polyisobutylene) in 150 mL heptane treating with 1.10 equiv/allyl group trichlorosilane in presence of 1×10^{-4} equiv/allyl group Pt vinylsiloxane at 70°, cooling and adding 15 g triethylamine and 15 mL 4-hydroxybutyl vinyl ether.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 28 OF 54 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 4

ACCESSION NUMBER: 2001:27692 BIOSIS
DOCUMENT NUMBER: PREV200100027692
TITLE: Inhibiting the activity of calf pregastric lipase: Effect of bile salts, lecithin, liposomes, phenyl boronic acid and diethyl 4-nitrophenyl phosphate.
AUTHOR(S): O'Connor, Charmian J. [Reprint author]; Manuel, Robyn D.
CORPORATE SOURCE: Department of Chemistry, University of Auckland, Auckland, New Zealand
SOURCE: Journal of Bioactive and Compatible Polymers, (November, 2000) Vol. 15, No. 6, pp. 489-502. print.
CODEN: JBCPEV. ISSN: 0883-9115.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jan 2001
Last Updated on STN: 15 Feb 2002

AB A commercial extract from oropharyngeal tissue of calves has been used as the source of partially purified pregastric lipase. Activity of the enzyme against 4-nitrophenyldecanoate was inhibited by the conjugated bile salts taurocholate, taurodeoxycholate, and tauro- and glycochenodeoxycholate in their monomeric form. Although solutions of L-alpha-lecithin (0-0.75 mg mL⁻¹) enhanced the activity of the lipase at all concentrations studied, with maximum rate enhancement (apprx190%) occurring within the range (0.11-0.34) mg mL⁻¹, even this concentration of

L-alpha-lecithin could not remove the inhibitory effect of the bile salts. The Michaelis-Menten parameters, V and KM, were determined for the activity of the enzyme against 4-nitrophenylacetate in the absence and presence of egg phosphatidylcholine (egg-PC) and egg-PC:cholesterol (10:1 mol/mol) liposomes. While values of V decreased slightly (and to the same extent) in the liposomal suspensions, the value of KM was decreased by 50% in the normal liposome but increased by 30% in the cholesterol impregnated liposome. The phenyl boronic acid / lipase dissociation constant was evaluated as 1.9 mM and pronounced inhibition was obtained in the presence of diethyl 4-nitrophenyl phosphate (E600). These inhibition results confirmed the presence of serine in the active site of calf pregastric lipase.

L3 ANSWER 29 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:195741 CAPLUS

DOCUMENT NUMBER: 130:337977

TITLE: Efficient Pd-catalyzed heterobenzylic cross-coupling using sulfonium salts as substrates and (PhO)3P as a supporting ligand

AUTHOR(S): Zhang, Shijie; Marshall, Daniel; Liebeskind, Lanny S.
CORPORATE SOURCE: Sanford S. Atwood Chemistry Center, Emory University, Atlanta, GA, 30322, USA

SOURCE: Journal of Organic Chemistry (1999), 64(8), 2796-2804
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:337977

AB S-(2-Furanylmethyl)tetramethylenesulfonium hexafluorophosphate, S-(2-thienylmethyl)tetramethylenesulfonium hexafluorophosphate, S-(3-thienylmethyl)tetramethylenesulfonium hexafluorophosphate, and S-(N-tert-butoxycarbonyl-2-pyrrolylmethyl)tetramethylenesulfonium hexafluorophosphate have been conveniently prepared from the corresponding alcs. These stable heterobenzylic sulfonium salts participate in palladium-catalyzed Stille cross-couplings with organostannanes. All but the last mentioned sulfonium salt are also active participants in palladium-catalyzed cross-coupling reactions with boronic acids and organozinc halides. Because the heterobenzylic cross-coupling reactants are potent alkylating agents, they scavenge the typical phosphines and arsines that otherwise could be used to stabilize the palladium catalyst over extended reaction times. This problem was overcome by the use of (PhO)3P as a unique supporting ligand for the palladium-catalyzed cross-coupling of heterobenzylic sulfonium salts.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 30 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:14060 CAPLUS

DOCUMENT NUMBER: 130:267480

TITLE: Organoboron in organized molecular systems. I. Synthesis and surfactant properties of aminoalkylboronic acid salts

AUTHOR(S): Le Toumeline, Jean-Brice; Baboulene, Michel
CORPORATE SOURCE: Laboratoire des Interactions Moleculaires et Reactivite Chimique et Photochimique (CNRS UMR 5623), Universite Paul Sabatier, Toulouse, 31062, Fr.

SOURCE: New Journal of Chemistry (1999), 23(1), 111-116
CODEN: NJCHE5; ISSN: 1144-0546

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To date there has been little use of organoboron compds. for construction of organized mol. systems. The synthesis and surface active properties of novel aminoorganoboron surfactants, which exploit certain physicochem. characteristics of the boron atom, is described here. Routes to the

boranylalkylamines with a strong boron-nitrogen intramol. complexation are described. They can account for the different strengths of intra- and intermol. boron-nitrogen complexation in the mols. produced by hydroboration of long-chain unsatd. amines. Methanolysis followed by acid hydrolysis produced the salts of aminoalkylboronic acids in excellent yield. Study of the surface properties of these boron derivs. indicate that they would be good surfactants. The influence of the alkylboronic acid chain is discussed. This new family of surfactants opens perspectives in chemical synthesis and applications as surface active agents.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 31 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:582881 CAPLUS

DOCUMENT NUMBER: 129:218190

TITLE: Plasticized liquid membranes and process for separating monosaccharides from disaccharides and from other monosaccharides

INVENTOR(S): Smith, Bradley D.; Riggs, Jennifer A.

PATENT ASSIGNEE(S): University of Notre Dame, USA

SOURCE: U.S., 10 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5800624	A	19980901	US 1996-734998	19961022
PRIORITY APPLN. INFO.:			US 1996-734998	19961022

OTHER SOURCE(S): MARPAT 129:218190

AB Fructose is separated from glucose via the membrane process to provide fructose in concns. sufficient for high-fructose syrup, and sucrose, glucose and fructose are separated from crude sources, e.g., molasses, sugar cane juice and beet sugar juice. The plasticized membranes are manufactured by dissolving a lipophilic polymer, e.g. cellulose triacetate, an organic liquid plasticizer, e.g., a hydrophobic ether such as 2-nitrophenyl octyl ether and a carrier compound, e.g., a quaternary ammonium salt or a boronic acid derivative with lipophilic substitution, e.g., 4-[8-(2-nitrophenoxy)octyloxycarbonyl]phenylboronic acid in a suitable solvent which, upon evaporation, provides the plasticized membrane. The membrane produced is homogeneous and has all 3 components equally dispersed in the membrane. Also provided are new boronic acid derivs. which are especially useful carrier compds. for the transport of monosaccharides, e.g., fructose through the membranes.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 32 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:217462 CAPLUS

DOCUMENT NUMBER: 128:217498

TITLE: Process for preparing dimethylaminoborane

INVENTOR(S): Holzner, Christoph; Bertram, Horst; Block, Hans-dieter; Mitschke, Karl-heinz; Menzel, Stefan

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 832894 A2 19980401 EP 1997-115688 19970910
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI
 DE 19639359 C1 19980610 DE 1996-19639359 19960925
 CA 2216329 AA 19980325 CA 1997-2216329 19970922
 JP 10109991 A2 19980428 JP 1997-273345 19970922
 BR 9704859 A 19981027 BR 1997-4859 19970924

PRIORITY APPLN. INFO.: DE 1996-19639359 A 19960925

OTHER SOURCE(S): CASREACT 128:217498

AB The preparation of dimethylaminoborane by the reaction of sodium **boronate** with dimethylammonium **salt** in the presence of ethylene glycol di-Me ether as solvent is described. Thus, reaction of sodium boronate with dimethylammonium chloride in monoglyme as solvent followed by workup gave 98% dimethylaminoborane.

L3 ANSWER 33 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:19110 CAPLUS

DOCUMENT NUMBER: 130:68301

TITLE: Facilitated transport of carbohydrates, catecholamines, and amino acids through liquid and plasticized organic membranes

AUTHOR(S): Smith, Bradley D.; Gardiner, Stephen J.; Munro, Tracey A.; Paugam, Marie-France; Riggs, Jennifer A.

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN, 46556, USA

SOURCE: Journal of Inclusion Phenomena and Molecular Recognition in Chemistry (1998), 32(2-3), 121-131
 CODEN: JIMCEN; ISSN: 0923-0750

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 20 refs. A number of methods are described to facilitate the transport of monosaccharides, catecholamines, and amino acids through bulk liquid membranes, supported liquid membranes and plasticized cellulose triacetate membranes. Transport is mediated by carrier compds., such as **boronic acids**, quaternary ammonium **salts** and crown ethers, that are dissolved within the lipophilic membranes. Two types of transport mechanisms are described, carrier diffusion and fixed-site jumping.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 34 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:466915 CAPLUS

DOCUMENT NUMBER: 125:143315

TITLE: Boronic ester and acid compounds, synthesis and uses

INVENTOR(S): Adams, Julian; Ma, Yu-Ting; Stein, Ross; Baevsky, Matthew; Grenier, Louis; Plamondon, Louis

PATENT ASSIGNEE(S): Proscript, Inc., USA

SOURCE: PCT Int. Appl., 144 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9613266	A1	19960509	WO 1995-US14117	19951027
W:	AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,			

NE, SN, TD, TG

US 6083903	A	20000704	US 1995-442581	19950516
AU 9641398	A1	19960523	AU 1996-41398	19951027
AU 710564	B2	19990923		
EP 788360	A1	19970813	EP 1995-939670	19951027
EP 788360	B1	20030528		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10510245	T2	19981006	JP 1996-514834	19951027
JP 3717934	B2	20051116		
AT 241631	E	20030615	AT 1995-939670	19951027
FI 9701746	A	19970606	FI 1997-1746	19970423
NO 9701929	A	19970612	NO 1997-1929	19970425
NO 310558	B1	20010723		
HK 1002059	A1	20030905	HK 1998-100951	19980207
FI 2004001415	A	20041103	FI 2004-1415	20041103
PRIORITY APPLN. INFO.:			US 1994-330525	A 19941028
			US 1995-442581	A 19950516
			WO 1995-US14117	W 19951027

OTHER SOURCE(S): MARPAT 125:143315

AB Peptidyl boronic acids and esters PNR[B1R1X1]ACHR2X2CHR3BZ1Z2 [P = aryl-, aralkyl-, heteroaryl-, or heteroarylalkylcarbonyl or -sulfonyl; B1 = N, CH; X1, X2 = CONH, CH(OH)CH2, COCH2; A = 0, 1, 2; R = H, alkyl; RR1 or RR2 (for A = 0) may form a ring; R1, R2, R3 = H, alkyl, cycloalkyl, aryl, etc.; Z1, Z2 = alkyl, hydroxy, alkoxy, aryloxy; Z1Z2 may form a moiety derived from a dihydroxy compound] and their pharmaceutically acceptable salts were prepared. The rate of degradation of proteins of an animal can be reduced by contacting cells of the animal with these boronic compds. Thus, N-(4-morpholinecarbonyl)- β -(1-naphthyl)-L-alanine-L-leucine boronic acid was prepared by coupling (1S,2S,3R,5S)-pinanediol leucine **boronate** trifluoroacetate **salt** with N-Boc- β -(1-naphthyl)-L-alanine, followed by deprotection, acylation with 4-morpholinecarbonyl chloride, and cleavage of the pinanediol moiety.

L3 ANSWER 35 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:382790 CAPLUS
 DOCUMENT NUMBER: 125:44975
 TITLE: Photographic developer
 INVENTOR(S): Parker, Michael John; Lannon, Anthony Martin; Long, William Edward
 PATENT ASSIGNEE(S): Ilford Limited, UK
 SOURCE: Brit. UK Pat. Appl., 21 pp.
 CODEN: BAXXDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

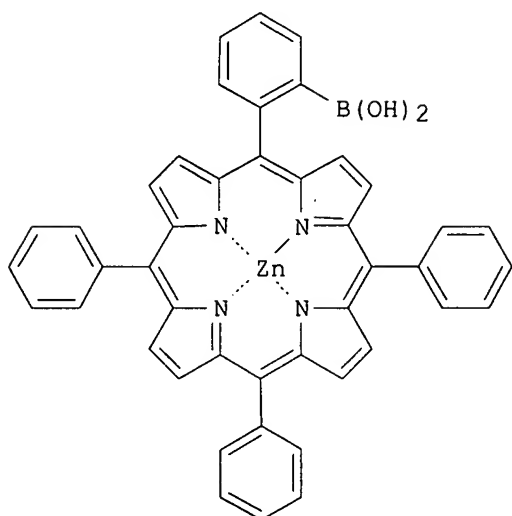
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 2292813	A1	19960306	GB 1994-17303	19940827
GB 2292813	B2	19990203		

PRIORITY APPLN. INFO.: GB 1994-17303 19940827

AB A photog. developing solution comprises an ascorbic acid or a salt thereof as a developing agent at a concentration of 0.01 M to 0.2 M, boric acid, a **boronic acid**, or a **salt** thereof as a color stabilizer at a concentration of 0.01 to 0.4 M, a sulfite salt at a concentration of 0.01 to 0.4 M, at least one basic buffer selected from carbonates, organic alkanolamines, phosphates, phenoxides, and hydroxides, the buffer being present in sufficient amount to keep the solution at a pH of 8.5 or above. The developer may also contain a second aminophenol or hydrazolidone developer and a metal complexing agent. The developer may be in the form of a concentrate

L3 ANSWER 36 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:134773 CAPLUS
 DOCUMENT NUMBER: 124:317613
 TITLE: Selective binding of glucose-6-phosphate, 3,4-dihydroxyphenylalanine (DOPA) and their analogs with a boronic-acid-appended metalloporphyrin
 AUTHOR(S): Imada, Tomoyuki; Kijima, Hideomi; Takeuchi, Masayuki; Shinkai, Seiji
 CORPORATE SOURCE: Faculty Engineering, Kyushu University, Fukuoka, 812, Japan
 SOURCE: Tetrahedron (1996), 52(8), 2817-26
 CODEN: TETRAB; ISSN: 0040-4020
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB Zinc(II) porphyrin I, bearing an intramol. boronic acid, was synthesized. It was shown on the basis of absorption spectroscopy, ^{31}P NMR spectroscopy and CD (CD) spectroscopy that I can bind glucose-6-phosphate (G-6-P) in a two-point interaction manner, one between the 1,2-diol moiety and the boronic acid moiety and the other between the phosphate moiety and Zn(II). This system was successfully applied to facile discrimination of G-6-P from analogous glucose-1-phosphate, which is very difficult by other methods. It was also shown that I is applicable to the selective binding of 3,4-dihydroxyphenylalanine and its analogs. In this system the boronic acid moiety in I binds the catechol moiety in amino acids and Zn(II) binds the amino group. Thus, the present study demonstrates that combination of metalloporphyrins and boronic acids enables us to design very potential receptors for guests containing a diol group and a ligand group within a mol.

L3 ANSWER 37 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1996:97157 CAPLUS
 DOCUMENT NUMBER: 124:146468
 TITLE: Preparation of dimethylaminoborane
 INVENTOR(S): Holzner, Christoph; Wagner, Alfred; Pantke, Dietrich; Block, Hans-Dieter; Moretto, Hans-Heinrich; Ohlendorf, Wolfgang
 PATENT ASSIGNEE(S): Bayer A.-G., Germany
 SOURCE: Ger., 4 pp.
 CODEN: GWXXAW
 DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4411752	C1	19951123	DE 1994-4411752	19940406
NL 9500553	A	19951101	NL 1995-553	19950322
US 5565615	A	19961015	US 1995-413681	19950330
JP 07278156	A2	19951024	JP 1995-97638	19950331
FI 9501598	A	19951007	FI 1995-1598	19950404
RU 2149874	C1	20000527	RU 1995-104897	19950405
PRIORITY APPLN. INFO.:			DE 1994-4411752	A 19940406

AB Reaction of **boronates** with dimethylammonium **salts** gave dimethylaminoborane. Thus, reaction of dimethylammonium chloride with sodium boronate in dimethylamine followed by workup gave 81.5% title dimethylaminoborane.

L3 ANSWER 38 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:333531 CAPLUS
DOCUMENT NUMBER: 125:57856
TITLE: Construction and functions of supramolecules with π -electron conjugated systems
AUTHOR(S): Arai, Sadao
CORPORATE SOURCE: Department of Industrial Chemistry, Tokyo Metropolitan Univ., Japan
SOURCE: Memoirs of Faculty of Engineering, Tokyo Metropolitan University (1995), 45, 41-45
CODEN: MFEUFG
PUBLISHER: Tokyo Metropolitan University, Faculty of Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Among the five topics of research, the construction of supramols. with azonia-aromatic compds. is described here. New cleft-type dicationic host mols. (I and II) with two azonia-aromatic moieties having quaternary nitrogen atom were synthesized by Pd(0)-catalyzed cross-coupling reaction between 10-bromobenzo[a]quinolizinium **salt** and the **boronic acids** derived from 2,6-diphenylpyridine derivative and dibenzofuran, resp. The tetracationic host (III) was obtained by the quaternization of two equivalent of 6-methylisoquino[8,7-a]quinolizinium salt with bis[4-(bromomethyl)phenyl]methane. The host III binds sodium 1,3,5-benzenetricarboxylate as a guest to form a 1:1 complex in aqueous solution
The guest anion is sandwiched between the two azonia-aromatic subunits.

L3 ANSWER 39 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:192477 CAPLUS
DOCUMENT NUMBER: 120:192477
TITLE: Water-Soluble Rigid-Rod Polyelectrolytes: A New Self-Doped, Electroactive Sulfonatoalkoxy-Substituted Poly(p-phenylene)
AUTHOR(S): Child, Andrew D.; Reynolds, John R.
CORPORATE SOURCE: Center for Macromolecular Science and Engineering, University of Florida, Gainesville, FL, 32611, USA
SOURCE: Macromolecules (1994), 27(7), 1975-7
CODEN: MAMOBX; ISSN: 0024-9297
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An alternating poly-p-phenylene (I) in which every other unit is disubstituted with sulfonatopropoxy units is prepared by Suzuki coupling of 1,4-dibromo-2,5-bis(3-sulfonatopropoxy)benzene di-Na salt (II) with 1,4-phenylenebis(boronic acid). A terphenyl model compound was prepared from II and PhB(OH)₂ to assist in the spectroscopic identification of I. I has relatively good thermal stability, with an onset of decomposition .apprx.250°, and is a good elec. conductor, called self-doped, showing both n-type and p-type conductivity

L3 ANSWER 40 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:163158 CAPLUS
DOCUMENT NUMBER: 120:163158
TITLE: Anomalous Rapid Reduction of Salicylaldehyde by Pyridine-Borane. Mechanism and Application to Selective Aldehyde Reduction
AUTHOR(S): Chen, Joseph; Wayman, Kjirsten A.; Belshe, Marie A.; DiMare, Marcello
CORPORATE SOURCE: Department of Chemistry, University of California, Santa Barbara, CA, 93106, USA
SOURCE: Journal of Organic Chemistry (1994), 59(3), 523-7
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 120:163158

AB The reduction of salicylaldehyde by pyridine-borane complex (PB) is much faster than that of other substituted benzaldehydes and ketones (seconds vs hours). Expts. reveal that this acceleration is due to an autocatalytic process involving a pyridinium **boronate salt**, a component of the equilibrating product mixture from PB reduction of salicylaldehyde. This pyridinium salt behaves as a mild Broensted acid and effectively accelerates aldehyde but not ketone redns. by PB. The observation that mild Broensted acids are catalysts for PB redns. led to the development of a method using AcOH in CH₂Cl₂ to promote the selective reduction of aldehydes in the presence of ketones.

L3 ANSWER 41 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:133430 CAPLUS
DOCUMENT NUMBER: 120:133430
TITLE: Phase-transfer catalysis in electrophilic substitution reactions. 3. Nitration of acenaphthene in a two-phase benzene-aqueous nitric acid system
AUTHOR(S): Kachurin, O. I.; Velichko, L. I.; Matvienko, N. M.
CORPORATE SOURCE: Inst. Fiz. Org. Khim. Uglekhim., Donetsk, Ukraine
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1993), 59(6), 642-7
CODEN: UKZHAU; ISSN: 0041-6045
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The process and kinetics of phase-transfer-catalyzed nitration of acenaphthene were studied in C₆H₆-aqueous HNO₃ (14-31%) containing catalytic amts. of dimethylstearyltaurobetaine, tetramethylammonium tetrakis(perfluorophenyl)**boronate**, or the Na **salt** of the latter. An electrophilic reaction mechanism is proposed.

L3 ANSWER 42 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:527805 CAPLUS
DOCUMENT NUMBER: 117:127805
TITLE: Assay for glycated blood proteins
INVENTOR(S): Sundrehagen, Erling; Frantzen, Frank
PATENT ASSIGNEE(S): Cockbain, Julian Roderick Michaelson, UK; Axis Research A/S
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9208984	A1	19920529	WO 1991-EP2163	19911113
W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MC, MG, MN, MW, NO, PL, RO, SD, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
CA 2096250	AA	19920515	CA 1991-2096250	19911113
CA 2096250	C	20020924		
AU 9188662	A1	19920611	AU 1991-88662	19911113
EP 557350	A1	19930901	EP 1991-919886	19911113
EP 557350	B1	19941005		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06502244	T2	19940310	JP 1991-517991	19911113
JP 2643027	B2	19970820		
ES 2061273	T3	19941201	ES 1991-919886	19911113
FI 104519	B1	20000215	FI 1993-2150	19930512
NO 9301747	A	19930714	NO 1993-1747	19930513
NO 311385	B1	20011119		
US 5506144	A	19960409	US 1993-50274	19930712
US 5919708	A	19990706	US 1995-570569	19951211
PRIORITY APPLN. INFO.:				
			GB 1990-24771	A 19901114
			WO 1991-EP2163	A 19911113

AB A method for assessing a glycosylated blood protein in a sample comprises a) optionally hemolyzing the sample to liberate cell-bound glycosylated protein; b) separating the glycosylated blood protein from the sample; c) contacting the sample before or during or after separation of the glycosylated proteins with a first signal-forming agent capable of binding to the glycosylated protein but not to the corresponding nonglycosylated protein; d) optionally, contacting the sample before or during or after separation of the glycosylated and nonglycosylated proteins with a second signal-forming agent capable of binding to the glycosylated protein and to the corresponding nonglycosylated protein; and e) assessing the signal-forming agents which have bound to the separated proteins and/or which have not bound to the glycosylated protein or the corresponding nonglycosylated protein; with the proviso that where the glycosylated protein comprises glycosylated Hb the first signal forming agent is a chromophore-labeled **boronic acid or salt** thereof having an absorption maximum >600 nm. In this method, the glycosylated protein which is labeled by the first signal-forming agent may be any one, or indeed any set, of the blood proteins. By appropriate selection of the proteins under assay, an indication may be obtained of the history of the patient's blood glucose control over the short, medium, and long (≤ 3 mo) term. Reagent preparation is described, and an apparatus for performing the method as claimed. A method is described to determine glycosylated albumin in whole blood using 2 dyes (a phenoxazine-boronic acid conjugate and Cr(III)-tetracarboxyphenylporphyrin) and rivanol precipitation (no data). Determination of glycosylated Hb and glycosylated serum proteins is also described.

L3 ANSWER 43 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:567868 CAPLUS

DOCUMENT NUMBER: 113:167868

TITLE: Benzene boronic acid inhibition of vitamin

A-bile-salt-stimulated human milk lipase interactions
AUTHOR(S): O'Connor, Charmian J.; Butler, Paul A. G.; Yaghi, Basma M.

CORPORATE SOURCE: Dep. Chem., Univ. Auckland, Auckland, N. Z.

SOURCE: Journal of Molecular Catalysis (1990), 60(2), 255-65
CODEN: JMCADS; ISSN: 0304-5102

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bile-salt-stimulated human milk lipase catalyzes both the hydrolysis of

retinyl palmitate and the esterification of retinol by palmitic acid. The equilibrium constant, $K = 2.82 \text{ mM}$, obtained from the ratio of the rate consts.

of

these two reactions, favors the formation of the ester. Sodium taurocholate stimulates the enzyme-catalyzed hydrolysis reaction but has no effect on the enzyme-catalyzed acyl transfer reaction. Benzene boronic acid serves as an inhibitor of both reactions and is an excellent model for probing the active site of bile-salt-stimulated human milk lipase. The kinetic parameters have been evaluated and comparisons have been drawn between bile-salt-stimulated human milk lipase and other serine hydrolases.

L3 ANSWER 44 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:177583 CAPLUS

DOCUMENT NUMBER: 112:177583

TITLE: Cross-coupling reaction of alkyl- or arylboronic acid esters with organic halides induced by thallium(I) salts and palladium catalyst

AUTHOR(S): Sato, Makoto; Miyaura, Norio; Suzuki, Akira

CORPORATE SOURCE: Fac. Eng., Hokkaido Univ., Sapporo, 060, Japan

SOURCE: Chemistry Letters (1989), (8), 1405-8

CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:177583

AB The cross-coupling reaction of alkylboronic acid esters with 1-alkenyl or aryl halides is successfully catalyzed by $\text{PdCl}_2(\text{dppf})$ or $\text{Pd}(\text{PPh}_3)_4$ in the presence of thallium(I) hydroxide or carbonate to give the corresponding alkenes or arenes in good yields. Similar coupling of arylboronic acid esters with aryl halides afforded biaryls.

L3 ANSWER 45 OF 54 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1989:446881 BIOSIS

DOCUMENT NUMBER: PREV198988095153; BA88:95153

TITLE: N-5 DIMETHYLAMINONAPHTHALENE-1-SULFONYL-3-AMINOBENZENEBORONIC ACID AS AN ACTIVE-SITE-DIRECTED FLUORESCENT PROBE OF BILE-SALT-STIMULATED HUMAN MILK LIPASE.

AUTHOR(S): O'CONNOR C J [Reprint author]; YAGHI B M

CORPORATE SOURCE: DEP CHEM, UNIV AUCKLAND, PRIVATE BAG, AUCKLAND, NEW ZEALAND

SOURCE: Journal of Molecular Catalysis, (1989) Vol. 52, No. 3, pp. 317-322.

CODEN: JMCADS. ISSN: 0304-5102.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

ENTRY DATE: Entered STN: 4 Oct 1989

Last Updated on STN: 6 Oct 1989

AB Resonance energy transfer has been used to identify the interaction of N-(5-dimethylaminonaphthalene-1-sulfonyl)-3-aminobenzene boronic acid (dansyl-benzene **boronic acid**) with bile-salt -stimulated human milk lipase, BSSL, and a binding constant $K_a = 8.6 + 10^6 \text{ M}^{-1}$ was measured. Benzene boronic acid competitively displaces dansyl-benzene boronic acid from the enzyme, $K_i = 42 \text{ } \mu\text{M}$. It is suggested that boronic acids may serve as useful probes for the active site of BSSL.

L3 ANSWER 46 OF 54 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5

ACCESSION NUMBER: 1989:446902 BIOSIS

DOCUMENT NUMBER: PREV198988095174; BA88:95174

TITLE: INHIBITION OF HUMAN MILK BILE-SALT-DEPENDENT LIPASE BY **BORONIC ACIDS** IMPLICATION TO THE BILE SALTS ACTIVATOR EFFECT.

AUTHOR(S): ABOUAKIL N [Reprint author]; LOMBARDO D
 CORPORATE SOURCE: CENTRE DE BIOCHIMIE ET DE BIOL MOL DU CNRS, 31 CHEMIN
 JOSEPH AIGUIER, BP 71, 13402 MARSEILLE CEDEX 9, FR
 SOURCE: Biochimica et Biophysica Acta, (1989) Vol. 1004, No. 2, pp.
 215-220.
 CODEN: BBACAQ. ISSN: 0006-3002.
 DOCUMENT TYPE: Article
 FILE SEGMENT: BA
 LANGUAGE: ENGLISH
 ENTRY DATE: Entered STN: 4 Oct 1989
 Last Updated on STN: 5 Dec 1989

AB The bile-salt-dependent lipase from human milk, which catalyzes the hydrolysis of the water-soluble substrate 4-nitrophenyl acetate and the water-insoluble substrate tributyrin, is competitively inhibited by phenyl boronic acid. This inhibitor does not interfere with the interaction of lipase either with the siliconized glass beads/water interface or with the activator bile-salt binding site. The boronic acid binds near or at the active site serine, since modification of this residue by diisopropylphosphorofluoridate (DFP) was prevented by phenyl boronic acid. Phenyl boronic acid binds 15-fold as tightly to bile-salt-dependent lipase as does 4-nitrophenyl acetate. Therefore, phenyl boronic acid bears analogy to a substrate rather than to a tetrahedral intermediate analog. Bile salts such as sodium taurocholate which are non-essential activators for the milk lipase activity on water-soluble substrates decrease the K_m as well as the enzyme inhibitor dissociation constant (K_i). They have a slight effect on k_{cat} . These results are interpreted in terms of an increase of the stability of the enzyme-substrate tetrahedral intermediate and in general of any transition states for the formation and for the decomposition of these intermediates upon the enzyme bile salts interaction.

L3 ANSWER 47 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1989:169808 CAPLUS
 DOCUMENT NUMBER: 110:169808
 TITLE: Two-probe label and capture nucleic acid hybridization technique and kit
 INVENTOR(S): Beebe, Joan Marlyn; Glanville, Linda Lee; Leary, Jeffry Joseph; Rice, Edward Gray
 PATENT ASSIGNEE(S): Beckman Instruments, Inc., USA
 SOURCE: PCT Int. Appl., 68 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

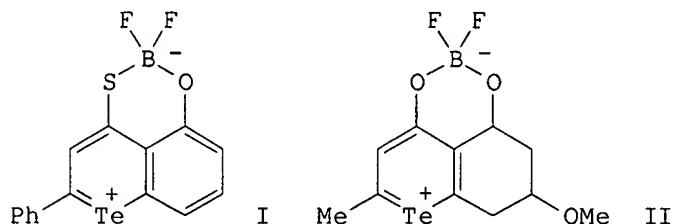
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8802785	A2	19880421	WO 1987-US2548	19871006
WO 8802785	A3	19880714		
W: AU, DK, FI, JP, NO				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8781036	A1	19880506	AU 1987-81036	19871006
JP 01501339	T2	19890511	JP 1987-506425	19871006
CA 1309932	A1	19921110	CA 1987-548798	19871007
FI 8802800	A	19880613	FI 1988-2800	19880613
NO 8802593	A	19880613	NO 1988-2593	19880613
PRIORITY APPLN. INFO.:			US 1986-919201	A 19861014
			WO 1987-US2548	A 19871006

AB A method for detecting a single-stranded (SS) target polynucleotide in a liquid sample comprises (a) combining the sample with ≥ 2 different SS probes that are complementary to different sequences of the target and are not complementary to each other; (b) contacting the reaction mixture with a solid carrier which binds to one of the probes (1st probe) and not to the target polynucleotide or the other (labeled) probe(s); (c) determining if any

of

the 2nd probe's label is bound on the solid carrier. For genetic disease and cancer diagnosis the method includes a severing step (using a restriction enzyme). Other methods and kits are disclosed. Plasmid pHBC6 was labeled with biotin by nick-translation with biotin-11-dUTP to make probe 1. The replicative form DNA of bacteriophage M13 10w was labeled with ^{32}P by nick-translation with dCTP- α - ^{32}P to make probe 2. Samples containing varying amts. of target DNA, M13 mpB1017, were mixed with 100 ng probe 1 and 50 mg probe 2, heat denatured, and adjusted to solution hybridization conditions. The product sandwich was separated from unhybridized probes using avidin-cellulose. The amount of probe 2 bound to the solid support was determined by liquid scintillation counting. Harvested signal peaked at .apprx.30 ng target DNA.

L3 ANSWER 48 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1988:549133 CAPLUS
 DOCUMENT NUMBER: 109:149133
 TITLE: Preparation of unnatural tellurium analogs of naturally occurring chromones and flavones. Control of ipso vs. ortho acylation, selective demethylation, and olefin-forming condensation reactions in benzo[b]tellurapyranones
 AUTHOR(S): Detty, Michael R.
 CORPORATE SOURCE: Corp. Res. Lab., Eastman Kodak Co., Rochester, NY, 14650, USA
 SOURCE: Organometallics (1988), 7(10), 2188-97
 CODEN: ORGND7; ISSN: 0276-7333
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 109:149133
 GI



AB Several factors controlling the intramol. acylations of β -(arylchalcogeno)cinnamoyl chlorides were examined Aryltelluro groups were more highly activated toward electrophilic attack than the arylthio and arylseleno groups. Te analogs of several naturally occurring, highly oxygenated chromones and flavones were prepared including eugenin (2-methyl-5-hydroxy-7-methoxy-4H-1-benzo[b]pyran-4-one), techtochrysin (2-phenyl-5-hydroxy-7-methoxy-4H-1-benzo[b]pyran-4-one), dimethylapigenin [2-(4-methoxyphenyl)-5-hydroxy-7-methoxy-4H-1-benzo[b]pyran-4-one], and trimethylfluteolin [2-(3,4-dimethoxyphenyl)-5-hydroxy-7-methoxy-4H-1-benzo[b]pyran-4-one]. These compds. were prepared from the resp. 5-methoxy-4H-1-benzo[b]tellurapyran-4-ones by reaction with $\text{BF}_3 \cdot \text{Et}_2\text{O}$ to give difluoroboronate complexes of the 4H-1-benzo[b]tellurapyran-4-ones by demethylation at the 5-position and difluoroboronate complexation at the 5-oxo substituent and the 4H-1-benzo[b]tellurapyran-4-one carbonyl O. The difluoroboronate complexes were isolable and represent novel heterocyclic structures. 5-Methoxy-4H-1-benzo[b]tellurapyran-4-thione formed difluoroboronate complex I upon treatment with $\text{BF}_3 \cdot \text{Et}_2\text{O}$. Hydrolysis of the difluoroboronates gave the phenolic 5-hydroxy-4H-1-benzo[b]tellurapyran-4-ones. The difluoroboronate complex II, bearing a 2-Me substituent, was activated toward condensation reactions of the 2-Me substituent with various aldehydes and ketones to give styryltellurachromones allowing synthetic entry to the hormothamnione

skeletal framework. In 2-methyl-4H-1-benzo[b]tellurapyran-4-ones lacking a 5-methoxy substituent, the 2-Me substituent was activated toward condensation reactions by reaction with Et fluorosulfonate. 2-Methyl-4-ethoxy-7-methoxy-4H-1-benzo[b]tellurapyrylium fluorosulfonate reacted with various aldehydes and ketones to give styryl-4H-1-benzo[b]tellurapyrylium salts. Both the difluoroboronate complexes and the 4-ethoxy-4H-1-benzo[b]tellurapyrylium salts could be hydrolyzed to the resp. styrylchromones. 2-Me substituents in 4H-1-benzo[b]tellurapyrylium species were much more reactive in condensation reactions than the resp., 4H-1-benzo[b]pyrylium species.

L3 ANSWER 49 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:437853 CAPLUS
DOCUMENT NUMBER: 109:37853
TITLE: The reaction of (trifluoromethyl)dialkylaminoboranes with hydrogen fluoride, hydrogen chloride and hydrogen bromide. X-ray structure investigation of the amineboranes (F3C)2B(X)NHMe2, X = F and OH
AUTHOR(S): Brauer, D. J.; Buerger, H.; Pawelke, G.; Weuter, W.; Wilke, J.
CORPORATE SOURCE: Anorg. Chem. Fachber., Univ. Gesamthochsch., Wuppertal, D-5600, Fed. Rep. Ger.
SOURCE: Journal of Organometallic Chemistry (1987), 329(3), 293-304
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:37853

AB The reactions of CF3B(NMe2)2 (I) and (CF3)2BNMe2 (II) with HX (X = F, Cl and Br) have been investigated. Addns. with preservation of the B-C bonds to yield species with tetracoordinate boron, along with some B-N cleavage, were observed. While I formed boronium salts CF3B(X)(NHMe2)2+X- with X = Cl and Br, CF3BF2·NHMe2 was obtained with HF. On the other hand, reactions of II with HX yielded the 1:1 adducts (CF3)2B(X)·HNMe2 in each case. Of these, the species with X = F (III) and X = OH (IV) (obtained by hydrolysis) were examined by single crystal x-ray diffraction. Surprisingly, no difference was found between the average B-C bond lengths of these borates [III: 1.612(8), IV: 1.624(4) Å] and that of II. The implications of this observation for B-CF3 bonding are discussed.

L3 ANSWER 50 OF 54 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1985:305587 BIOSIS
DOCUMENT NUMBER: PREV198579085583; BA79:85583
TITLE: A GENERAL SYNTHESIS OF 5 ARYLNICOTINATES.
AUTHOR(S): THOMPSON W J [Reprint author]; GAUDINO J
CORPORATE SOURCE: MERCK, SHARP AND DOHME, WEST POINT, PA 19486, USA
SOURCE: Journal of Organic Chemistry, (1984) Vol. 49, No. 26, pp. 5237-5243.
CODEN: JOCEAH. ISSN: 0022-3263.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Arylboronic acids were found to couple efficiently with 5-bromonicotines to yield 5-arylnicotines. The reaction is considerably more sensitive to steric inhibition in the arylboronic acid component than in the pyridyl bromide 4. The dianion **salt** of the **boronic acid** is implicated as the reactive intermediate responsible for the facile coupling reaction. Pure arylboronic acids are best prepared by using triisopropyl borate as the transmetalating agent.

L3 ANSWER 51 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1974:100640 CAPLUS
DOCUMENT NUMBER: 80:100640
TITLE: Thermal decomposition of **salts** of

boronic acids

AUTHOR(S): Fields, C. L.; Doyle, J. R.
CORPORATE SOURCE: Dep. Chem., Univ. North. Colorado, Greeley, CO, USA
SOURCE: Thermochimica Acta (1974), 8(3), 239-48
CODEN: THACAS; ISSN: 0040-6031

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Salts with the formula $M[RB(OH)_3]$ (where M is Li, Na, or K and R is C_6H_5 or C_6H_{11}) and $M[C_6H_5B(OH)_3]_2$ (where M is Ca, Sr, or Ba) were prepared. The thermal decomposition in air and in N proceeded through a series of intermediate compds. to the resp. anhydrous metaborate salt. The possible nature of these intermediate compds. is considered.

L3 ANSWER 52 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:113936 CAPLUS

DOCUMENT NUMBER: 76:113936

TITLE: Additives for olefin polymerization catalyst systems

INVENTOR(S): Horvath, Bertalan

PATENT ASSIGNEE(S): Phillips Petroleum Co.

SOURCE: U.S., 3 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3625864	A	19711207	US 1969-818803	19690423
PRIORITY APPLN. INFO.:			US 1969-818803	A 19690423

AB A com. CrO_3 polymerization catalyst was modified with a complex of tetrakis(isopropoxy)titanium (I) [546-68-9] and either benzeneboronic acid [98-80-6], triphenyltin hydroxide (II) [76-87-9], or trimethyltin hydroxide [56-24-6] to give polyethylenes (III) [9002-88-4] of higher melt index. In an example, C_2H_4 in isopentane was polymerized at 220.deg.F and 450 psig for 70 min with a CrO_3 catalyst modified with I-II complex (activated at 1500.deg.F) to give III of melt index 0.75, as compared to 0.15 for a catalyst not containing a perturbing agent complex.

L3 ANSWER 53 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1971:65610 CAPLUS

DOCUMENT NUMBER: 74:65610

TITLE: Compositions for removing hair from skin or hide

INVENTOR(S): Heidemann, Eckhard; Hahn, Fritz

PATENT ASSIGNEE(S): Deutsche Gold- und Silber-Scheideanstalt vorm.

Roessler

SOURCE: Ger., 3 pp.

CODEN: GWXXAW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 1669344	A	19710114	DE 1967-D53674	19670725
NL 6807589	A	19690128	NL 1968-7589	19680529
GB 1227881	A	19710407	GB 1968-1227881	19680723
PRIORITY APPLN. INFO.:			DE 1967-D53674	A 19670725

AB The time for dehairing skins or pelts with amines, ClO_2 ClO_2^- , per compds., or alkali metal or alkaline earth boronates can be shortened to 4-6 hr if 1:1 to 1:10 BuOH, PrOH, and/or iso-PrOH is added to the float.

L3 ANSWER 54 OF 54 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1963:40098 CAPLUS

DOCUMENT NUMBER: 58:40098
 ORIGINAL REFERENCE NO.: 58:6849g-h, 6850a
 TITLE: Cyclic boronates and their amine complexes
 AUTHOR(S): Finch, Arthur; Lockhart, J. C.
 CORPORATE SOURCE: Roy. Holloway Coll., Englefield Green, UK
 SOURCE: Journal of the Chemical Society, Abstracts (1962)
 3723-6
 CODEN: JCSAAZ; ISSN: 0590-9791

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 OTHER SOURCE(S): CASREACT 58:40098

AB 2-Phenyl-1,3,2-dioxaborolane (I), b0.5 56°, 80-95% yield;
 5-methyl-2-phenyl-1,3,2-dioxahorolane (II), b0.5 54-6°, 60-00%
 yield; 4,5-dimethyl-2-phenyl-1,3,2-dioxaborolane (III), b0.8 68°,
 85-93% yield; 2-propyl-1,3,2-dioxaborolane (IV); 2-phenyl-1,3,2-
 dioxaborinane (V), 90% yield; 4-methyl-2-phenyl-1,3,2-dioxaborinane (VI),
 b0.5 75-6°; 2-propyl-1,3,2-dioxaborinane (VII), and dibutyl
 phenylboronate (VIII) were studied. The cyclic phenylboronates were
 prepared by: (a) azeotropic removal of H2O and toluene from an equimolax
 mixture of a diol and phenylboronic anhydride. followed by fractional
 distillation; (b) equimolar mixts. of diol and phenylboronic anhydride
 liquefied
 when shaken at room temperature The H2O was separated mechanically and the
 cyclic
 phenylboronate was dried over MgSO4. Compds. prepared both ways had
 identical infrared spectra. Preparation of the propylboronates was not
 described. Complexes of the cyclic boronates with cyclohexylamine (A),
 benzylamine (B), and piperidine (C) were prepared by mixing equimolar
 quantities of the amine and boronate at room temperature, then adding an
 equivalent
 volume of hexane and cooling to -80°, if necessary, to precipitate the
 complex. Usually the 1:1 complex was found, but 2A.III formed
 preferentially, and a 2:1 mixture of A and I gave a mixture of 2:1 and 1:1
 complexes. The following 1:1 complexes were isolated: I.A (m.
 108.5°), II.A (m. 85-6°), V.A (m. 73-6°), VI.A (m.
 57-9°), I.B (m. 74-5°), V.B, I.C, II.C, IV.C, and V.C. The
 higher amine complexes lost amine at .apprx.0.1 mm. to form the 1:1
 adducts.

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